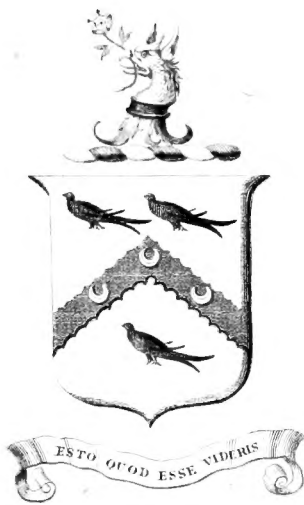
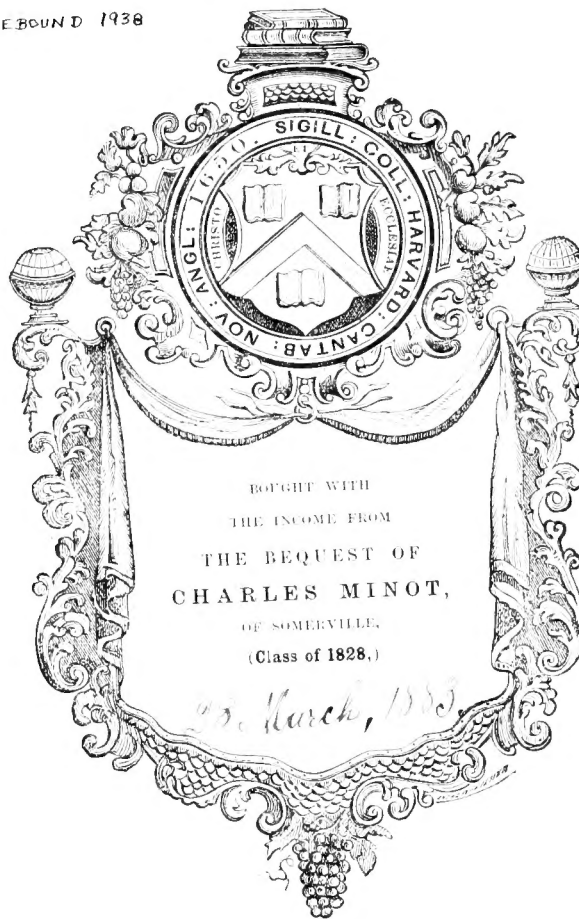


ED
LEED

OS



REBOUND 1938



THE GENERA
OF
DIURNAL LEPIDOPTERA:

COMPRISING

THEIR GENERIC CHARACTERS,
A NOTICE OF THEIR HABITS AND TRANSFORMATIONS, AND
A CATALOGUE OF THE SPECIES OF EACH GENUS.

BY EDWARD DOUBLEDAY, F.L.S. F.Z.S.

ASSISTANT IN THE ZOOLOGICAL DEPARTMENT OF THE BRITISH MUSEUM;

SECRETARY OF THE ENTOMOLOGICAL SOCIETY OF LONDON;

MEM. ROY. GEOGR. SOC.; ENT. SOC. FRANCE, STETTIN, AND PENNSYLVANIA; V. P. BOT. SOC. LONDON; HON. MEM. NAT. HIST. SOC. HESSE-DARMSTADT;
COR. MEM. NAT. HIST. SOC. BOSTON U. S., ROY. SOC. AGR. AND NAT. HIST. LYONS, LINN. SOC. LYONS, ETC. ETC.

AND

JOHN O. WESTWOOD, F.L.S.

PRESIDENT OF THE ENTOMOLOGICAL SOCIETY OF LONDON;

HON. MEM. HIST. SOC. QUEBEC, SOC. NAT. HIST. BOSTON U. S., ENT. SOC. PENNSYLVANIA, AND ENT. SOC. STETTIN;

MEM. SOC. CÆS. NAT. CUR. MOSCOW; PHYSIOGR. SOC. LUND; SOC. ROY. SCI. LILLE; SOC. ROY. LYONS; SOC. HIST. NAT. MAURITIUS;
SOCC. CUVIERR., PHILOMAT., AND ENTOMOL. DE FRANCE, ETC. ETC.

ILLUSTRATED WITH EIGHTY-SIX PLATES,

BY WILLIAM C. HEWITSON,

AUTHOR OF "BRITISH OÖLOGY," ETC.

IN TWO VOLUMES.

VOL. II.

CONTAINING THE REMAINDER OF THE FAMILY NYMPHALIDÆ, AND THE FAMILIES MORPHIDÆ, BRASSOLIDÆ,
SATYRIDÆ, LIBYTHEIDÆ, ERYCINIDÆ, LYCÆNIDÆ, AND HESPERIDÆ;

WITH A SUPPLEMENT:

BY JOHN O. WESTWOOD.

LONDON:

LONGMAN, BROWN, GREEN, AND LONGMANS.

1850—1852.

MAR 23 1883

Heinrich Lund.

LONDON:
SPOTTISWOODES AND SHAW,
New-street-Square.

3498
17.2

Genus XXXVII. CALLIANIRA.

CALLIANIRA *Boisd. MS.*EVONYME *Hübner. Verz. bek. Schmett.*NYMPHALIS *Godt.*

HEAD not so broad as the thorax, hairy.

Eyes round, moderately prominent, smooth.*Maxillæ* rather slender, scarcely so long as the thorax.*Labial Palpi* porrect, ascending, extending beyond the forehead, clothed with rather loose scales; those in front of the first joint very long, the second with a not very well marked dorsal tuft. First joint short, two fifths the length of the second, dilated towards the base, truncate at the apex; second joint subcylindric, slightly curved, slightly swollen before the apex, which is truncate; third joint less than one third the length of the second, elongate-obovate, the apex somewhat pointed.*Antennæ* about three fourths the length of the body, slender, terminating in gradually incrassated, rather slender club, rather obtuse at the apex.

THORAX oval, moderately stout, densely hairy.

Anterior Wings trigonate. Anterior margin slightly rounded. Outer margin nearly straight, two thirds the length of the anterior. Inner margin equal in length to the outer, very slightly emarginate. Costal nervure dilated at its base, terminating a little before the middle of the anterior margin. Subcostal nervure slender; its first and second nervules arising just before the end of the cell; the third arising about half way between the end of the cell and the origin of the fourth, terminating at the apex; the fourth arising rather nearer to the origin of the first than to the outer margin. Cell about one third the length of the wing. Upper disco-cellular nervule very short; middle disco-cellular nervule much curved inwards; outer disco-cellular nervule about twice the length of the middle, curved inwards, terminating at the origin of the third median nervule. Third median nervule considerably curved.*Posterior Wings* obovate, the shoulder considerably produced; anterior margin nearly straight, except at the base; outer margin much rounded, slightly sinuate, nearly equal in length to the anterior. Precostal nervure simple, long, directed forwards. Costal nervure much curved. Discoidal nervule arising from the second subcostal, not far from its origin. Cell closed by a slender disco-cellular nervule. Median nervule curved.*Anterior Legs* of the males clothed with hairs of moderate length. Femur slightly curved, nearly cylindric, rather thickened towards the apex, which is obliquely truncate. Tibia not quite so long as the femur, much curved, nearly cylindric, the apex obliquely truncate. Tarsus rather shorter than the tibia, slender, subcylindric, pointed.*Middle and Posterior Legs* moderately stout; the femora of the former longer than of the latter, equal to the tibiae. Tibiæ with two interno-lateral series of spines, the spines rather slender and widely placed. Tarsi about equal in length to the tibiae, spiny below; the spines on all the joints except the fifth numerous, arranged in four series; the fifth with only three or four spines on each side. First joint quite as long as, or rather longer than, the rest combined; second joint less than one third, third joint less than one fourth of the length of the second; fourth joint about half the length of the second; fifth joint somewhat oval, equal in length to the second. Claws curved, grooved below. Paronychia with the outer lacinia coriaceous, very broad, lancet-shaped, the sides much rounded, very villous; the inner lacinia narrower, shorter, and thinner than the outer, hairy. Pulvillus two-jointed, short; the second joint broad.

(The typical species of this genus are of a moderate size, and are distinguished by the brilliant blue and purple gloss on the upper side of the wings towards the margins; on the under side they are of dull brown tints, slightly glossed with purple, and varied with black markings, with ocelli in pairs towards the outer angle both of the fore and hind wings, and also towards the anal angle of the latter. *C. Amelia* and *Sophonisba* (which I have not seen) differ in having the fore wings traversed, both above and below, by a broad oblique white bar, and in having their under surface much more variegated, but with the markings disposed as in the former. From the *Catagrammæ* they are distinguished at once by having the discoidal cell of all the wings entirely closed, in this respect agreeing with the *Epicaliæ*.

The species are inhabitants of the New World, ranging from Mexico to Brazil. There are four undescribed species in Dr. Boisduval's collection from Brazil and Columbia.—J. O. W.)

CALLIANIRA.

1. CALL. ALCMENA *E. Doubleday, Gen. Diurn. Lep. pl. 28. f. 1. (1847).*
Mexico. B. M.2. CALL. EUROTA *E. Doubleday, List. of Lep. Ins. Brit. Mus. 91.*
(1845).

June 1. 1850.

*P. Eurota Cram. t. 24. f. C. D. (1775).*Nymph. *Euphemia Godt. Enc. M. ix. 418. n. 216. (1819).*
Brazil. B. M.

3. CALL. AMELIA *Boisduval MS.*

Papilio Amelia Cram. t. 136. C. D.; *Godart, Enc. M.* ix.
p. 418. (*Nymphalis Am.*); *Hübner, Verz. bek. Schmett.*
n. 583. (*Evonyme Am.*).
Surinam.

4. CALL. SOPHONISBA.

Papilio Sophonisba Cramer, t. 295. A. B.; *Godart, Enc. M.* ix. p. 824. (*Vanessa Soph.*); *Hübner, Verz. bek. Schmett.* n. 584. (*Evonyme Sophonisba*).
Surinam.

Genus XXXVIII. PYRRHOGYRA.

PYRRHOGYRA *Hübner, Verz. bek. Schmett.*

CORYBAS *Boisduval MS.*

NYMPHALIS *Godt.*

HEAD rather small.

Eyes very prominent, oval when seen sideways, naked.

Forehead with a small tuft in front.

Maxillæ long and slender.

Labial Palpi porrect, ascending; those of the males being elevated to the level of the top of the head, elongate-conic, and pointed, the terminal joint scarcely distinguishable from the preceding, unless denuded of scales, extending in front about the length of the head, covered with fine scales, the base with curved scaly hairs, and the upper part of the middle joint with a slightly defined tuft; those of the female nearly twice as long as the head, with the terminal joint elongate, slender, and horizontal.

Antennæ slender, four fifths of the length of the entire body. Club rather small and gradually formed, compressed and grooved.

THORAX moderately stout, clothed in front and behind with short woolly hairs.

Tippets small.

Fore Wings trigonate. Fore margin rather rounded. Outer margin more or less emarginate and sinuated, less so in the females, two thirds of the length of the former. Hind margin nearly straight, and equal in length to the outer margin. Costal vein terminating before reaching the middle of the costa. Subcostal vein rather dilated at the base; the first and second branches arising close together, considerably before the junction of the costal vein with the costa; the third and fourth branches being separated at their origin by a distance nearly equal to that between the insertion of the second and third branches, and also between the fourth and the tip of the wing. The upper disco-cellular veinlet* branches off close below the insertion of the second branch of the submedian; it is almost obsolete, the first discoidal vein arising almost at its base; the middle disco-cellular is longer than the upper one, and oblique, but shorter than the lower disco-cellular, which is also oblique, and closes the discoidal cell, uniting with the third branch of the median vein quite close to its origin, so that the discoidal cell extends about two fifths of the length of the wing.

Hind Wings somewhat oval; outer margin sinuated and angulated at the extremity of the outer branch of the median vein. Cell closed by the lower disco-cellular veinlet, which is oblique, curved, and united to the median close to the origin of its outer branch. Upper disco-cellular veinlet arising very near the base of the branch of the subcostal vein.

Fore Legs of the male short, pectoral, and clothed with long flossy hairs. The tarsi nearly as long as the tibiæ, and exarticulate. *Fore Legs* of the female also short, clothed with close appressed scales. Tarsi rather dilated and obliquely truncate at the tip, where several pairs of spines indicate the articulations which are seen on denuding the limb.

Middle and Hind Legs simple, slender, and rather short. Tibiæ with very short terminal spurs. Tarsi terminating above in a thin semicircular flap, fringed with eight long setæ. Claws small, but very much hooked, and acute at the tips. Paronychialia with the outer division nearly equal in length to the claw, broadly knife-shaped, finely setose; inner division smaller and much more slender, obtuse at the tip. Pulvillus very short, broad, and leathery.

ABDOMEN small and slender, about half the length of the anal margin of the hind wings.

LARVA cylindrical, with two long, spiny, straight, erect horns on the head, and with large tubercles at the sides of the body, each emitting two or three short setose spines.

PUPA perpendicularly suspended, with a curved protuberance in the middle of the thoracic case, and an angular projection at the base of the abdomen.

* In this and the remainder of the generic descriptions, I purpose to adopt the nomenclature proposed by the late Mr. Edward Doubleday for the veins of the wings of the Diurnal Lepidoptera, in order that a uniformity may exist in this respect throughout the work. I must, however, request the entomologist to observe that in doing so I by no means agree with his views, especially with respect to the veins which he terms disco-cellular and discoidal. I have, however, employed the term veins instead of nerves for these organs, the researches of modern physiologists having sufficiently proved them to be portions of the system of circulation. The nervules I indifferently term veinlets or branches. — J. O. W.

The curious distinction existing between the sexes of these insects in the development of the labial palpi, together with the vivid red streaks surrounding the white, or very pale green patches on the under side of the wings, are excellent characteristics of this genus. The concentration of the branching off of the first and second branches of the subcostal vein, and of the upper and middle disco-cellular veins within a very small space, at some distance before the junction of the costal vein with the costa, is also to be noticed.

The species are black above, with a bar of greater or less width of white or very pale greenish colour traversing all the wings, but broken into two or three patches in the fore wings; on the under side these patches extend to the base of the wings, and are more or less surrounded by a brilliant red edging. The smaller species, *P. Neærea*, has the fore wings in the female slightly rounded on the outer margin, whilst the new species figured in our Plate 32. has the fore wings much more pointed at the tips than in the typical species.

The Geographical Range of the species extends from Mexico to Brazil including the West Indian Islands. I have not seen the two manuscript species which Dr. Boisduval has added to the group, neither have I seen *P. Sulpitia* and *Irenæa*, which also appear to belong to the present genus, having the red margins to the white spots on the under side of the wings replaced by fulvous orange. The last named species is, however, represented by Cramer with the hind wings entire. *P. Sulpitia* is also very closely allied to *Victorina Stelenes*.

The transformations of *P. Neærea* were observed by Stoll in Guiana. The CATERPILLAR has the head, the thoracic segments, and back yellow, the sides are reddish brown with white spots, and the terminal segments dull yellowish. It feeds on the leaves of the coffee tree. The CHRYSALIS is green tinged with yellow; and the butterfly is produced in nine days.

PYRRHOGYRA.

1. PYRR. TIPHUS *Linn. Mus. reg. Utr. p. 308., Syst. Nat. ii. p. 776, (P. Tipha); Clerck, Ic. t. 32. f. 3.; Cramer, l. p. 8. f. D. E.; Hübner, Verz. bek. Schmett. p. 43. n. 379. (Pyrrhogyra T.); Godart, Enc. M. ix. p. 379. (Nymphalis Typha).*

P. Neærea var. β *Fabricius, Ent. Syst. iii. i. p. 138.*

Honduras, St. Lucia, Guiana, Brazil. B. M.

2. PYRR. NEÆREA *Linn. Mus. Reg. Utr. p. 297., Syst. Nat. ii. p. 732.; Cramer, l. pl. 75. C. D.; Stoll, Suppl. pl. 4. f. 3, 3A.; Hübner, Verz. bek. Schmett. p. 42.; Fabr. Ent. Syst. iii. i. p. 137.; Godart, Enc. M. ix. p. 380.*

Guiana, Brazil. B. M.

3. PYRR. EDOCLA *E. Doubl. Gen. Diurn. Lep. pl. 32. f. 5.*

Venezuela, Bolivia. B. M.

4. PYRR. OTOLAIS *Boisduval MS.*

Mexico.

5. PYRR. MERIA *Boisduval MS.*

Cayenne.

6. PYRR.? SULPITIA.

Papilio Sulpitia Cramer, pl. 328. f. A. B.

Nymphalis Symachia Godart, Enc. M. ix. p. 179.

Aphnæa Sym. Boisduval MS.

Metamorphæa Elissa Hübner, Verz. bek. Schmett. p. 43.

Guiana.

7. PYRR.? IRENEA.

Papilio Irenæa Cramer, pl. 328. f. C. D.; Godart, Enc. M. ix. p. 419.

Surinam.

Genus XXXIX. LUCINIA.

LUCINIA *Hübner, Samml. ex. Schmett. Bd. ii.*

NICA *E. Doubleday.*

AUTODEA *Boisduval MS.*

BODY small and weak.

HEAD small.

Eyes oval, naked.

Antennæ rather short. Club small, distinct, suboval, much compressed, concave, with the extreme tip curved outwardly.

Labial Palpi porrect, ascending, rather slender, about as long again in front as the head, the tip being nearly equal with the level of the head, clothed beneath and in front with fine downy hairs and white scales; the upper or hind surface of the middle joint with fine slender hairs; terminal joint short, slender, finely scaly, and destitute of hairs.

THORAX moderately robust.

Fore Wings subtrigonal. The fore margin slightly rounded. The outer margin very slightly emarginate, with scarcely any sinuations. The costal, median, and submedian veins somewhat swollen at the base. The costal vein not extending above two fifths of the length of the costa. The subcostal vein emitting its first branch at some distance before the junction of the costal vein with the costa, and exactly opposite to the middle of the vein connecting the first and second branches of the median vein; the first subcostal branch short; second subcostal branch rising near the former, and not much longer than it; the third and fourth subcostal branches separated from each other at their insertion by a space nearly equal to that between the insertion of the second and third branches, and also between that of the fourth and the tip of the wing. The first and second discoidal veins arise together between the first and second subcostal branches, without the intervention of any disco-cellular veins; the base of the second discoidal vein being curved, and thus representing the middle disco-cellular, whilst the lower disco-cellular is entirely wanting; so that the discoidal cell is quite open.

Hind Wings subtriangular. Fore margin nearly straight, except at the base. Outer margin rounded and much sinuated. The discoidal vein almost straight, and arising close to the insertion of the subcostal branch. Lower disco-cellular vein obsolete, whence the cell is open.

Fore Legs very small, pectoral, outwardly clothed with very fine silky hairs and scales, those of the female being less hairy. Tarsus in the latter about half the length of the tibia, rather dilated towards the tip, and oblique on one side, where it is armed with several fine short bristles.

Four hind Legs slender; femora slightly dilated towards the base. Spurs at the tip of the tibiæ very small. Tarsi slender; basal joint more than half the length of the tarsus. Ungues and paronychialia very small, curved, and wide apart. Pulvillus very short and broad.

ABDOMEN small and slender.

LARVA and PUPA unknown.

This is a genus of small and rather plain-looking butterflies, so far as the upper surface of the wings is concerned, being of a fulvous colour with broad confluent patches of brown upon the outer portion of the fore wings; beneath, however, they are more elegantly marked, the hind wings being silky white with orange bars, and with large circular spots enclosing silvery green and rich purple eyelets; a pair towards the outer angle, and another pair towards the anal angle, agreeing in this respect with the *Callianiræ* and *Catagrammæ*.

Of their habits in the perfect state, or their transformations, nothing has hitherto been recorded.

The species appear to be confined to the West Indian Islands.

They are nearly related in general habit to *Epiphile* and *Myscelia*, and, like some of the species of the former genus, the males have the wings glossed with purple. From all these, however, they differ in having the discoidal cell, both in the fore and hind wings, open. An approach to this character is indeed indicated in several of the former, by the lower disco-cellular vein being almost obliterated.

LUCINIA.

1. LUC. CADMA *Gen. Diurn. Lep.* pl. 30. f. 6.

Papilio Cadma Drury, II. pl. xviii. f. 1, 2.; *Fabricius*, *Ent. S.* iii. 1. 241.; *Godart*, *Enc. M.* ix. p. 421. (*Nymphalis C.*).

Nica Cadma E. Doubleday, *List. Lep. B. Mus.* App. p. 23. B.M.
Jamaica.

2. LUC. SIDA *Hübner*, *Samml. ex. Schmett.* Bd. ii.; *Doubleday*, *List. Lep. B. Mus.* App. p. 23. (*Nica S.*).

Haiti.

B.M.

Genus XL. ETEONA.

ETEONA *Boisd. MS.*

PANOPÆA *Hübner. Zutr.*

EUTERPE p. *Boisd. Species Ins. Lep.*

BODY small and slender.

HEAD small.

Antennæ moderately long and slender. Club slender, about one fourth of the entire length of the antennæ, gradually formed, slightly curved, with a slight keel running along the inside.

Eyes hairy.

Labial Palpi rather elongate, directed upwards, and extending considerably above the level of the top of the head. Middle joint long and slender, compressed, and thickly hairy in front; terminal joint elongate, oval, and also hairy.

THORAX slender.

Fore Wings subtrigonal. Fore margin slightly rounded. Outer margin four sevenths of the length of the fore margin, angulated below the tip. Costal vein extending two thirds the length of the costa. Subcostal with the first branch arising beyond the middle of the wing; second branch arising at a small distance beyond it; third branch arising nearly opposite to the junction of the costal vein with the costa; fourth branch extending to the tip of the wings. Upper disco-cellular vein obliterated. The first discoidal vein arising at a very little distance beyond the insertion of the second branch of the subcostal. Middle and lower disco-cellular of nearly equal length (closing the long discoidal cell), the former with its anterior two thirds straight and transverse, then suddenly angulated outwardly, throwing off a branch into the discoidal cell from the angle; outer disco-cellular oblique, and joining the third branch of the median vein at about the same distance from the origin of the third branch as between the latter and the second submedian branch.

Hind Wings subovate, rather elongate. Fore margin slightly rounded. Outer margin very much sinuated. The discoidal vein long and united to the subcostal, at a very little distance from the origin of the branch of the subcostal, by a very short transverse upper disco-cellular, and throwing off a short branch into the

discoidal cell. Lower disco-cellular rising at about one third of the length of the discoidal vein, oblique and short, being about as long as the basal part of the third branch of the median vein, where it is united to it.

Fore Legs of the male? small, pectoral. Tarsus minute, slender, oblong, apparently consisting of a single joint, and very hairy.

Hind Legs moderately long.

ABDOMEN small, extending as far as the extremity of the anal vein of the hind wings.

LARVA and *PUPA* unknown.

The species on which this genus is founded possesses so much the general appearance of some of the species of *Euterpe* that M. Boisduval described it in his "Species" as a member of that genus, without any expression of doubt. The structure of the fore legs at once, however, removes it from the family to which *Euterpe* belongs. It bears considerable affinity to the genus *Synchlœ*, but is at once distinguished by the hind wings having the discoidal cell closed, and by the second branch of the subcostal vein of the fore wings being inserted beyond the insertion of the first discoidal vein. It bears a miniature kind of resemblance to *Papilio Semire Cr.* (*Hippolyte Drury*), a species nearly allied to the genus *Diadema*. On the under side the fore wings are coloured as above, but paler at the tips and with dark streaks; and the hind wings are much varied with white spots, and buff, yellow, and brown shades, with slender longitudinal black lines between the veins.

The only species which I have yet seen belonging to the genus inhabits Chili and Brazil.

ETEONA.

1. ETEONA TISIPHONE Boisduval MS.; Doubleday, *List. of Lep. Brit.*
Mus. Append. p. 21.; Doubl. Westw. & Hewitson,
Genera of Diurn. Lep. pl. 42. f. 3.
Euterpe Tisiphone Boisduval, Species, t. p. 411.

Panopæa Tisiphone Hübner, *Zutr.* pt. 5. p. 28. f. 911.
912.
Chili, Brazil. B. M.

Genus XLI. MORPHEIS.

MORPHEIS Hübner. (*Papilio Nymphalis Lemonias dubia* Morpheis.)

BODY rather long and hairy, not robust.

HEAD rather small, hairy, without any decided frontal tuft.

Eyes naked.

Labial Palpi porrected to more than twice the length of the head, slightly ascending, not reaching above the level of the middle of the eyes; alike in both sexes, compressed, very hairy, especially beneath; terminal joint nearly half as long as the preceding, slender, and with short hairs above and long ones beneath.

Antennæ not quite half the length of the fore wings, rather robust, and terminated by a large, very compressed, oblong-ovate club, deeply grooved within at the base, the outside clothed with white scales.

THORAX rather small, rather hairy, especially in front.

Fore Wings elongate subtrigonal. Anterior margin rather rounded. Outer margin about two thirds of the length of the anterior, rounded externally, with the portion occupied by the extremity of the discoidal veins more evidently rounded. Costal vein rather strong, reaching a little beyond the middle of the costa. Subcostal vein slender; its first branch arising at about one third of its length from the base of the wing; second branch arising a little beyond the middle; third branch arising at a little distance beyond the second; fourth branch arising at about the distance of three quarters of the length of the wing. The vein between the first and second branches is rather deflexed, emitting the upper disco-cellular nearer to the first than to the second branch. This upper disco-cellular is very short and transverse, but distinct; the middle disco-cellular is also short and curved; and the lower disco-cellular is longer, straight, and running obliquely, so that it closes the discoidal cell at about the middle of the wing, uniting with the third branch of the median vein at a little distance from its origin, the latter being but little curved.

Hind Wings subtriangular. The costal margin nearly straight. Outer margin regularly rounded. Anal margin forming a groove for the reception of the abdomen. Precostal vein bent at a nearly right angle, its tip reaching the margin of the wing. Branch of subcostal vein emitted near the base of the wing. Discoidal vein arising at a little distance beyond, without any upper disco-cellular vein; lower disco-cellular wanting, so that the discoidal cell, which is very narrow, is open. Branches of the median vein almost straight.

Fore Legs of the male minute and pectoral, clothed with long black hairs; the tarsus reduced to a single short joint. Fore legs of the female nearly twice the length of those of the male, scaly. The tarsus as long as the tibia, well articulated, five-jointed; the tips of the joints within armed with two short spines; terminal joint destitute of unguis and pulvillus and much shorter than the preceding.

Four Hind Legs moderately long, slender. The tibiae with a double row of short spines on the inside; tibial

spurs rather long and slender. Tarsi with short slender spines on the under side. Claws long, curved, and acute at the tip, sickle-shaped. Paronychia with the outer lacinia shorter than the claws, slender, pointed, and finely setose; inner division shorter and pointed. Pulvillus broadly transverse-ovate.

ABDOMEN rather long, silky, furnished on the under side near the extremity, in the female, with two patches of pale woolly down.

This is one of the most remarkable species of butterflies with which I am acquainted, not only on account of the peculiarity of its colouring, but also of its structural characters, which remove it from all the preceding genera of the present family. At first sight, indeed, it might be mistaken for some singular species of *Euterpe*; it does not, however, belong to the family which contains that genus; nor can I consider it as belonging to *Acræa*, to some of the aberrant species of which it bears a certain resemblance, such as *Acr. Ozomene Godart*, and *A. Hylonome* of E. Doubleday, both represented in Plate XVIII.* of this work. The large club of the antennæ, the long very hairy palpi, the very short narrow and open cell of the hind wings, and the well developed legs of the female, are the essential characters of the genus; whilst the black colour of both surfaces of the wings, marked near the tips of the fore wings with a few longitudinal dashes of pale buff, which on the under side are considerably increased in size, the hind wings also being marked by longitudinal streaks of the same colour extending from the base to the fringe, the patch of bright red colour at the base of all the wings, the red colour of all the legs in the female and of the four hind ones in the male (the fore legs of the latter sex being black), give to the species a very peculiar appearance. In several circumstances, such as the comparatively small size, and dark colours varied with pale markings, it agrees with *Eteona*; and it is on this account that I have placed it in this position, rather than postpone its description to the end of the present family, where it would break the chain of affinities extending through *Amathusia*, *Morpho*, &c.

The only specimens I have seen of the species are a pair (male and female) in my own collection, most kindly presented to me, with an extensive series of Mexican insects, by E. P. Coffin, Esq.

MORPHEIS.

1. *MORPH. EHRENBERRGII* Hübner, *Samml. exot. Schmett.* Bd. iii. pl. —.; *Doubl. Westw. & Hewitson, Gen. Diurn. Lep.* pl. 43. f. 1. Mexico.

Genus XLII. EPICALIA.

EPICALIA *Boisd. MS.*

CATONEPHELE and *NESSÆA* *Hübner.*

NYMPHALIS p. *Godt.*

BODY robust; wings large and strong.

HEAD not so broad as the thorax, hairy, with a slight frontal tuft extending between the labial palpi as far as the extremity of the second joint.

Eyes oval, moderately prominent, naked.

Labial Palpi projecting beyond the forehead, ascending, but not reaching to the level of the top of the eyes; the third joint directed forwards, clothed with short appressed scales, except on the under side of the basal joint, and the extremity of the upper side of the second joint, where the scales are looser and longer. First joint two fifths of the length of the second, nearly reniform; second joint not so stout as the first, nearly cylindrical, when denuded of scales a little curved, the base rounded, the apex rather obliquely truncate; third joint about one third of the length of the second, subconic, the base rounded.

Antennæ fully three fourths of the length of the body, thickening insensibly into a slender elongate club which is compressed and slightly curved, obliquely pointed at the apex, not grooved below.

THORAX oval, robust, hairy; the hairs of the metathorax very long.

Anterior Wings trigonate, the apex sometimes truncate. Fore margin considerably rounded. Outer margin sometimes nearly straight, sometimes emarginate, two thirds the length of the anterior margin. Inner margin rather longer than the outer, more or less emarginate. Costal vein rather stout, extending two thirds of the length of the fore margin. Subcostal vein slender; its first and second branches arising before the end of the cell, and at some distance apart; third branch arising at some distance beyond the cell, and nearly opposite to the junction of the costal with the costa, and terminating at the apex of the wing; its fourth branch arising nearer to the tip of the wing than to the origin of the third branch. Upper disco-cellular vein extremely short, oblique, and arising at a little distance beyond the origin of the second branch of the subcostal vein; middle disco-cellular vein rather short and curved; lower disco-cellular about twice the length of the middle one, nearly straight, running rather obliquely outwards, and joining the third branch of the median vein at about the same distance from its origin as exists between the second and third branches. Third branch of the median nerve considerably curved.

Hind Wings trigonate-ovate. Costal margin curved. Outer margin rounded, generally more or less sinuated.

Precostal vein forked. Costal vein much arched. Subcostal vein branching at a short distance from its base. Discoidal vein arising near the base of the branch of the subcostal. Disco-cellular distinct, arched, united with the median vein very near the base of its outer branch.

Fore Legs very slender, pectoral, clothed at the sides with long, delicate, silky, white hairs. Tarsi exarticulate; nearly as long as, and of equal thickness with, the tibia. *Fore Legs* of the female rather longer than those of the male; clothed with short scaly hairs, except at the base of the femora beneath, where they are more hairy. Tarsus nearly as long as the tibia, flattened, and obliquely truncate at the extremity; the terminal one third of the tarsus being articulated into five joints, each armed on the inside with very short spines; the terminal joint short, and destitute of claws.

Four Hind Legs moderately long, scaly. The tibia with a few very small spines in irregular longitudinal series. Tarsus more distinctly spined; the spines on the first joint forming four series; the second to the fifth joints with lateral rows of short spines, and with numerous spines of irregular size between the rows; the under side of the last joint nearly destitute of spines. Claws short, much curved, and grooved below. Paronychia with the outer lacinia shorter than the claw; inner lacinia nearly as long as the outer, and broader than it at the base.

ABDOMEN scarcely longer than the head and thorax united.

LARVA long, cylindrical; head armed with two erect verticillated spines; segments of the body armed with short spiny fascicles.

This is a genus composed of moderate-sized butterflies, remarkable for the rich contrast of their colours, the ground of the wings being generally velvet black, with large regular-shaped patches of the brightest orange. On the under side the wings are much less striking, the various dark marks being ill defined. *Ep. Ancæa* differs from the other species in having the fore wings marked by an oblique bar of the most delicate pale greenish blue, the hind wings of the male having a broad fascia of orange which is wanting in the female, which sex of a dull brown colour above with the pale fascia of the fore wings as in the male; the discoidal cell of the fore wings is also marked in the female across the middle with an oblong transverse patch of dark red edged with black lines, and with a lunate mark of the same kind at the extremity of the cell. This species differs from the more typical ones, such as *Numilius*, in having the second branch of the subcostal vein and the upper disco-cellular arising both close together, and by the middle and lower disco-cellular forming together a regular curve. This species differs in the extent of the pale markings in the male, sometimes occurring with a very broad orange bar across the hind wings occupying nearly the whole of the base, whilst sometimes it is much narrower, having one third of the base of the wings black. The specimen in the British Museum from Mexico, figured in our Plate XXIX. under the name of *E. Aglaura*, differs only from the ordinary males of *Ancæa* in having the pale band of the fore wings very slightly narrower, in having a small pale oblique mark near the tip of the fore wings (as in the female of *Ancæa*), and in having the orange mark of the hind wings confined to the costal portion of the disc. Even if permanent in these characters, I can only regard it as a geographical variety of *E. Ancæa*.

Epicalia Nyctimus has the orange marking on the upper surface of the wings formed into a nearly equally broad orange bar extending obliquely across all the wings. The palpi are longer in this species than in the others, and the extremity of the fore wings is angulated, although much less so than in *E. Pierretii* (Plate XXIX. f. 4.)

The males of *Ep. Acontius* are remarkable for the peculiar dilatation of the inner margin of the fore wings and of the costal margin of the hind wings, the submedian vein of the former being furnished on the under side with a very wide fascicle of delicate hairs nearly a third of an inch in length, lying close upon the lower disc of the wing, the corresponding space of the upper surface of the hind wing having the scales much larger, and arranged in ridges. The observation of the insect in a state of nature will alone explain the use of this singular structure.

The *LARVA* of *Ep. Acontius*, figured by Stoll, is long, cylindrical, and of a green colour, the under surface and sides of the body and legs being dark yellow; the head is black, with two large white spots, and with two long, straight, erect, verticillated, and pointed horns; the second and following segments of the body are also furnished with several short, spinose, black spines. It feeds on the tamarind tree, and is transformed into a perpendicular chrysalis, which Stoll has omitted to figure.

The larva of *Ep. Ancæa* resembles the former, but it is green, with a reddish streak along the sides of the body; the head dirty yellow, with two erect yellowish horns, more spinose than in the former; and each segment of the body has a tuft of green spiny hairs. It feeds on the citron tree, and is transformed into a suspended chrysalis of a green colour, the butterfly appearing in about ten days.

I have not seen the three manuscript species of *M. Boisduval*, at the end of the genus. *E. Cerambus* may, however, prove to be identical with the variety of *Ep. Ancæa* named *Aglaura*.

The species are exclusively natives of the hotter regions of the New World.

EPICALIA.

1. *EP. NYCTIMUS* Westw. MS.
Mexico, Guayaquil, Venezuela. B. M.
2. *EP. PIERRETHI* E. Doubleday MS.
Doubl. Westw. & Hewitson, *Gen. D. Lep.* pl. 29. f. 4.
Bolivia. B. M.
3. *EP. AUTINOE*.
Nymphalis Autinoe Godart, *Enc. M.* ix. p. 410.
Para. B. M.
4. *EP. ACONTIUS*.
Pap. Acontius Linn. *Mant. Ins.* i. 537. (1775), (nec Syst.
Nat. ii. p. 106. n. 12.).
Pap. Antiochus Fabricius, *Syst. Ent.* 480. (1771), *Sp.*

Ins. ii. p. 53. n. 253., *Mant. Ins.* ii. p. 26. n. 269.,
Ent. Syst. iii. pl. 1. 44. n. 154.; *Drury, Ill. exot. Ent.*
iii. Appendix pl. 7. f. 3, 4.; *Donovan, Ins. China*, pl.
37. f. 2.; *Godt. Enc. M.* ix. p. 410. 196. (*Nymphalis* A.)
Papilio Eupalemon Cramer, pl. 143. f. B. C. (1782);
Stoll, Suppl. Cram. pl. 1. f. 8. (larva); *Lucas, H. N.*
Lep. exot. pl. 72. f. 4.
Catonephele Eupalemena Hübn. *Verz. bek. Schmett.* p. 40.
n. 349.
Brazil (not China, as stated by Fabricius, &c.). B. M.

5. *EP. NUMILIUS*.
Papilio Numilia Cramer, pl. 8. f. 3. F.

- Papilio Numilius Fabricius, Ent. Syst. iii. i. 53. n. 614; Donovan, Naturalist's Repos. ii. pl. 55. f. 2.; Godart, Enc. M. ix. 409. n. 198.*
 Brazil. B. M.
6. EP. ANCÆA.
 ♂ *Papilio Ancæa Linn. Syst. Nat. ii. p. 781. n. 184.; Clerck, Icon. t. 31. f. 2.; Fabricius, Ent. Syst. iii. i. t. 154. n. 474.*
Papilio Obrinus Naturf. vi. 128. t. 6. f. 1, 2.; Sulzer, Hist. Ins. t. 16. f. 1, 2.; Cramer, Pap. t. 338. C. D.; Donovan, Ins. India, pl. 37. f. 3.
Nessæa Ancæa Hübn. Verz. bek. Schmett. no. 360.; Godart, Enc. M. ix. p. 409.
 ♀ *Papilio obrinus Linn. Mus. Reg. Lud. 255., Syst. Nat. ii. p. 766. n. 113.; Clerck, Icon. t. 31. f. 3.; Fabricius, Ent. Syst. iii. i. 154. n. 475.; Cramer, Pap. pl. 49. f. E. F.; Stoll, Suppl. Cram. pl. 6. f. 5. (larva).*
 Brazil. B. M.
 Var. Ep. *Aglaura E. Doubleday, MS.; Doubl. Westw. & Hewitson, Gen. D. Lep. pl. 29. f. 3.*
 Mexico. B. M.
7. ? EP. LYGISTUS *Boisduval MS.*
 Bogota.
8. ? EP. CERAMBUS *Boisduval MS.*
 Mexico.
9. ? EP. CORINNETE *Boisduval MS.*
 Peru.

Genus XLIII. CALLITHEA.

CALLITHEA *Boisd.*VANESSA and ARGYNNIS *Godt.*ASTEROPE *p. Hübn.*

BODY robust; wings large and rounded.

HEAD moderate-sized, larger in the males than in the females, with a frontal tuft before the antennæ.

Eyes prominent and naked.

Labial Palpi porrect, directed upwards, but not reaching the level of the top of the eyes; subcylindrical, covered with scales, the upper side of the second joint being clothed with short distinct hairs; terminal joint small and slender.*Antennæ* short, slender, not more than two fifths the length of the fore wings, terminated by a short, very large, compressed, and somewhat spoon-shaped club, composed of about ten joints, slightly keeled.

THORAX robust; the collar and metathorax clothed with short woolly hair.

Fore Wings large, ovate-trigonal. Fore margin much arched. Apical margin about two thirds of the length of the fore margin, much rounded. Inner margin rather longer than the apical, subemarginate, or sometimes very slightly rounded. Costal vein extending to the middle of the costa. Subcostal vein with the first branch arising at about one third of the length of the wing from the base; second branch arising at a very little distance beyond the first; third branch arising at about three fourths of the distance from the base of the wing, and extending to the tip; fourth branch arising half way between the third and the tip. First disco-cellular very short, almost indistinct; branching off from the subcostal vein just beyond the origin of its second branch, at the distance of two fifths from the base of the wing; middle disco-cellular short, curved; lower disco-cellular very slender, oblique, and slightly curved, joining the median vein close to the base of its third branch, thus closing the cell at a little distance before the middle of the wing. Third branch of the median vein gradually curved for about one-third of its basal length.*Hind Wings* subtriangular, rounded along the costal margin. Outer margin very much rounded and entire. Anal margin deeply grooved. Precostal vein much curved outwardly; as is also the costal, especially along its basal half. Subcostal vein branching at the distance of about one third from the base of the wing. Discoidal vein arising very near the fork of the subcostal, the upper disco-cellular forming its base; the lower disco-cellular curved, very slender, and arising at about the same distance from the base of the upper disco-cellular as between the latter and the fork of the subcostal, uniting with the median vein close to the origin of its third branch, the pointed extremity of the cell extending to the middle of the wing.*Fore Legs* of the male small, pectoral, densely clothed with slender, white, silky hairs. Femora slender. Tibia and tarsus rather broader, somewhat flattened, and of nearly equal length. *Fore Legs* of the female rather shorter than those of the male, scaly. The femur slightly clothed beneath with hairs. Tibia shorter and rather thicker than the femur at its extremity. Tarsus rather shorter than the tibia, its extremity distinctly articulated when denuded of scales. The tip of the first joint simple; the second, third, and fourth, with two short spines at the extremity of each, on the under side; terminal joint small, conical, and destitute of claws.*Four Hind Legs* rather short and stout. Femora and tibiæ not spined, and rather slightly clothed with scales. Tarsi with several rows of very short spines on the under side. Claws very much curved, sickle-shaped. Paronychialia with the outer lacinia rather slender, and obtuse at the tip; inner lacinia somewhat conical, finely setose.

ABDOMEN rather large.

LARVA and PUPA unknown.

Nothing can exceed the brilliancy of the beautiful insects comprising this genus. Our Plate XXIV. fig. 1. represents the female of *C. Sapphira*, the male of which has the upper surface of the wings of the most intense purple blue, with a large patch of velvety black on the disc of each; on the under side the wings are of a remarkable glaucous bronze colour, with black spots arranged in three rows, the base of the hind wings in both sexes, and the disc of the fore wings in the female, being orange colour. The specimen which served for our figure was unfortunately deficient in its palpi, and the clubs of the antennæ are not represented sufficiently large. *C. Leprieurii* is of the same size as the preceding, but differs from it in several structural characters. The fore wings are considerably broader even than in *C. Sapphira*, and the discoidal cell in the hind wings of the male is clothed with black hairs, lying flat on the surface of the wing. The labial palpi are also greatly elongated in both sexes, extending to nearly twice the length of the head. The upper side of the wings in both sexes is black, with a tinge of dark blue, and a subapical bar of silky glaucous green; the male being distinguished by an intense blue gloss on the disc of the fore wings. Beneath, both sexes are of a glaucous bronzed green with black streaks and spots, and with the base of all the wings marked with small vivid carmine patches.

Mr. Wallace, who has recently met with both these splendid species on the banks of the river Amazon, informs us that the males frequent the tops of trees like the Purple Emperor butterfly of Europe, and are consequently extremely difficult to capture, the females being found nearer the ground.

The structure and clothing of the labial palpi at once remove this genus from the neighbourhood both of *Argynnis* and *Vanessa*, in which genera the typical species was successively placed by Godart.

CALLITHEA.

1. CALL. SAPPHIRA.

Oreas Corusca Sapphira Hübn. *Samml. exot. Schm.* Band i. f. —. (m. and f.).

Asterope Sapphira Hübner, *Verz. bek. Schm.* p. 66. n. 641.

Vanessa Callithea Godart, *Enc. M.* ix. f. 324.; Guérin, *Iconogr. R. An. Ins.* pl. 78. f. 1. a (fem.).

Argynnis Call. Godart, *Enc. M.* ix. p. 807.

Callithea Sapphira Boisduval, *Sp. Gen. des Lép.* pl. 10.

(6. B. f. 4. m. 5. f.); Doubl. Westw. & Hewitson, *Gen. D. Lep.* pl. 24. f. 1. (fem.).

Interior of South America, Santarem, River Amazon.

2. CALL. LEPRIEURII Feisthamel in Guérin, *Mag. de Zoologie*, 1835, pl. 122. (male).

Central Guiana, Monteallegre, River Amazon.

Genus XLIV. AMNOSIA.

AMNOSIA Boisduval, MS.

BODY rather slender; wings large.

HEAD narrower than the thorax, rather smaller in the female than in the male, with a well defined frontal tuft.

Eyes oval, naked.

Labial Palpi porrected to nearly twice the length of the head, directed upwards, but not reaching to the level of the top of the eyes, cylindrical, forming, when applied against each other, an elongate conical beak, scaly outside, finely setose within, and with a slight dorsal tuft of setæ at the extremity of the second joint; terminal joint ovate-conical.

Antennæ half the length of the fore wings, slender, porrected, nearly straight, terminated by a very slender elongated club, gradually thickening for a considerable distance, rather obliquely truncate at the tip, and not grooved.

THORAX oval, with the collar woolly, and the metathorax clothed with rather short hairs.

Fore Wings large, trigonate. Anterior margin curved. Apical margin straight. Inner margin nearly straight, and very slightly longer than the apical one. Veins not strong. Costal vein rather the strongest, extending to the middle of the fore margin. Subcostal vein slender; its first branch arising at some distance before the extremity of the discoidal cell; second branch arising at the distance of one third from the base of the wing; third branch arising near the middle of the wing, and just opposite to the extremity of the costal vein; fourth branch arising at three fourths of the length of the wing. Upper disco-cellular exceedingly short, almost obsolete, arising close beyond the base of the second branch of the subcostal; middle and outer disco-cellular forming a nearly continuous arch, with the curve towards the base of the wing, closing the discoidal cell, which does not extend beyond one third of the entire length of the wing; the lower disco-cellular being longer than the middle one, and joining the median vein close to the origin of its third branch, which is not much curved at its base.

Hind Wings somewhat quadrangular ovate; the costal margin being nearly straight; the outer margin entire and not sinuated, but obsoletely angulated at the extremity of the third branch of the median vein, or rather the space between it and the anal angle is nearly straight. Precostal vein forming a short straight spur. Subcostal vein branching at the distance of one fourth of the length of the wing from the base. The upper disco-cellular arising at a very little distance beyond the branch, and forming the base of the discoidal vein; lower disco-cellular very slender, oblique, slightly curved, and rising at the same distance from the base of the upper disco-cellular as between the base of the latter and of the branch of the subcostal, closing the discoidal cell exactly at the base of the third branch of the median vein.

July 1. 1850.

Fore Legs of the male small and pectoral, slightly hairy, with the tarsus exarticulate, and not above half the length of the tibia. *Fore Legs* of the female closely clothed with small scales. Femur and tibia rather longer than those of the male. Tarsus as long as the tibia, rather dilated and compressed at the extremity, which is articulated, the articulations indicated before the limb is denuded by very small spines at the tips of the joints beneath; terminal joint very small, and destitute of claws.

Four Hind Legs moderately long, scaly. Tarsi as long as the tibiæ, clothed with scaly hairs. Claws small, much curved; not extending beyond the upper flap of the terminal joint of the tarsus, which is fringed with long hairs. Paronychia small, with unequal-sized, obtuse, finely setose lacinia.

TRANSFORMATIONS unknown.

The handsome insect forming the type of the present genus is somewhat larger than those immediately preceding, and although possessing a pale blue oblique bar extending across the fore wings from the middle of the fore margin to the anal angle, as in *Epicalia Ancæa* (with which it also agrees in the length and slenderness of the antennæ), yet the ocellated spots on the hind wings give it more the appearance of an *Agrias* or *Smyrna*. A fine variety of the male having the ocelli strongly marked is represented in our Plate LI. The female differs in being paler brown, with the eyes still more strongly defined, and the fascia of the fore wings white, powdered at the sides with pale blue atoms. The head of this sex is evidently smaller than that of the male. The under surface of the wings is still paler, and similarly but more strongly marked, having several small additional indistinct eyes near the tip of the fore wings, and the fascia of the wings in the male suffused with brown.

AMNOSIA.

1. *AMNOSIA DECORA* Boisduval MS.

Doubl. Westw. & Hewitson *Gen. D. L.* pl. 51. f. 3. (male).
Java, Serampore.

B.M.

Genus XLV. CYRESTIS.

CYRESTIS Boisd.

MARPESIA p. Hübn.

PAPHIA p. Horsfield.

AMATHUSIA p. Zinken-Sommer, Kollar.

BODY small, slender; wings large and delicate.

HEAD small, broader than the neck, but narrower than the middle of the thorax, strongly tufted in front.

Eyes very prominent, naked.

Antennæ not half the length of the fore wings, very slender, and terminated by an elongated, very gradually formed, slender club.

Labial Palpi long, slender, directed upwards to about two thirds of the height of the eyes, and porrected to nearly twice the length of the head; somewhat cylindrical, scaly. Basal joint clothed beneath with rather short woolly hairs; second joint also similarly clothed on the upper side, the joints not being apparent unless denuded of scales; terminal joint nearly as long as the second, slender.

THORAX squamose, slightly hirsute behind. Collar narrow and distinct.

Fore Wings large, subtriangular. Fore margin slightly rounded. Apical margin somewhat truncate or slightly rounded, five sixths of the length of the fore margin, sinuated along its greater part; apical angle rather acute; anal angle emarginate and somewhat lobed. Inner margin not above two thirds of the length of the anterior, rather rounded outwardly towards the base, but emarginate beyond the middle. Costal vein slender, extending to the middle of the fore margin. Subcostal vein rather thicker; its first branch arising at the distance of one third of the length of the wing from its base; second branch arising at a very little distance beyond the first, close to the anterior extremity of the discoidal cell; third branch arising at about two thirds of the length of the wing; fourth branch arising half way between the base of the third and the tip of the wing, to which it extends, the terminal division of the vein itself being rather deflexed. Upper disco-cellular very short, and longitudinal, forming the base of the upper discoidal vein; middle and lower disco-cellular veins forming a straight transverse termination to the discoidal cell, which forms a triangle occupying about one third of the length of the wing; the lower disco-cellular being about three times the length of the middle one, very slender, sometimes almost or entirely obsolete, and united with the median vein exactly at the base of its third branch, which is regularly arched.

Hind Wings somewhat hexagonal, elongated. The costal margin nearly straight for more than half its length, when it is emarginate to the outer angle. Outer margin sinuated from the outer angle to the extremity of the third branch of the median vein, where the wing is produced into a short, narrow, curved, and obtuse tail;

thence to the anal angle the wing appears truncate, the anal angle itself being developed into a short, broad, spatulated tail. Precostal vein forming a slender, curved, simple spur. Costal vein much curved along its basal portion, then straight to the commencement of the emargination at the outer angle of the wing. Subcostal branched at about one fourth of the length of the wing from the base, emitting the upper disco-cellular (close to the origin of its branch) which forms the base of the discoidal vein; the lower disco-cellular arising at the same distance from the base of the upper disco-cellular as exists between the base of the subcostal vein and its branch; lower disco-cellular straight, very thin, and united to the median vein at the base of its third branch.

Fore Legs of the male very slender, short, and pectoral. The femur as long as the remainder of the limb, curved outwardly about the middle, and clothed beneath with long silky hairs. Tibia very slender, scaly, clothed within with short hairs, as is also the tarsus, which is not above the fifth of the length of the tibia, very slender, simple, and exarticulate. *Fore Legs* of the female considerably longer than those of the male, slender, and pectoral. Femur thickly clothed beneath with short silky hairs. Tibia slender, gradually thickened towards the tip, finely scaly. Tarsus gradually thickened, short, with several pairs of minute spines near the tip beneath, indicating the very short articulations, the three terminal ones being extremely short, last joint without any claws or their appendages.

Hind Legs moderately long and slender, scaly. Tibia with a few very minute spines, arranged wide apart in two rows; tibial spurs very short. Tarsi equal in length to the tibia, with several rows of minute spines on the under surface; basal joint about half the length of the tarsus; terminal joint furnished with long setæ on its upper side at the tip. Claws small, much curved. Paronychia bilacinated, finely setose; the outer lacinia curved, broader, and obtuse; the inner lacinia small, narrow, slender, and rather pointed.

ABDOMEN small, and slender, not above one third of the length of the hind wings.

TRANSFORMATIONS unknown.

The insects of this genus are amongst the most delicately formed and elegant species amongst the Nymphalidæ; the two species represented in our Plate XXXII. being the most extreme in their forms, as well as exhibiting the general style of colours and marking of these pretty insects, which, in addition to these circumstances, are distinguished by the elongated palpi, and tailed and lobed structure of the hind wings. In this latter respect they approach Timetes; but the insects of that genus have the tails longer, and are at once distinguished by having the discoidal cell of all the wings open, the lower disco-cellular vein being obsolete.

The typical species, *C. Hylas*, well figured by Clerck, has been confounded with a distinct insect from Java, which is remarkable for the difference of the ground colour of the wings in the two sexes, those of the males being orange, and those of the females white, whence Zinken-Sommer was led to regard the sexes as distinct species. There is a remarkable monstrous specimen of this Javanese species in the collection of the British Museum, having the subcostal and discoidal veins and the extremity of the left fore wing abortive, so that the branches of the median vein are obliged to perform their office, and are accordingly bent forwards, the terminal branch extending to the tip of the wing, which is oval at the extremity. In some of the smaller species, such as *C. Risa* *E. Doubleday*, and a small Javanese species for which I am indebted to Dr. Horsfield, to which I have applied the name of *C. Rahria*, the second branch of the subcostal vein of the fore wings, instead of arising before the extremity of the discoidal cell, arises half way between its extremity and the base of the third subcostal branch, agreeing in this respect with Timetes. The lower disco-cellular vein of the fore wings closing the discoidal cell is shown by the insects of this genus to be of inconstant value, being very well defined in *C. Camillus*, extremely slender but apparent in *C. Thyodamas*, and quite obsolete in *C. Recaranus*.

The greater number of the species of this genus are natives of India, the islands of the Indian Archipelago, and New Guinea; one very elegant species, *C. elegans*, has been described by Dr. Boisduval from Madagascar; whilst *C. Camillus*, the largest species in the genus, is a native of Tropical Western Africa.

CYRESTIS.

1. *CYR. HYLAS* Clerck, *Icon. t. 40. f. 4. 4a.* (nec Godt.)
2. *CYR. MENALIS* Erichs. *Nov. Act. Acad. Cæs. Nat. Cur. xvi., Suppl.* 402. tab. L. f. 3.
Philippine Islands. B. M.
3. *CYR. RECARANUS* Westw.
Marpesia Hylas Hübner, *Samml. exot. Schmett.* Band iii. f. —. (m. and fem.); Godart, *Enc. M.* ix. 361. n. 41. (Nymphalis H.).
Cyrestis Hylas? *E. Doubleday, List. Lep. Brit. Mus.* p. 88.
♂ *Amathusia lutea* Zink. in *Nova Acta*, xvi. t. 14. f. 1.
♀ *Amathusia nivea* Zink. in *Nova Acta*, xvi. t. 14. f. 2.
Java. B. M.
4. *CYR. THYODAMAS* Boisduval in *Cur. R. An. edit. Crochard, Ins. t.* 138. f. 4.; *E. Doubleday, List. Lep. B. Mus.* p. 88.; *Doubl. Westw. & Hewitson, Genera Diurn. Lep.* pl. 32. f. 31.
Amathusia Ganeschia Kollar in *Hugel, Reise nach Kaschmir*, p. 430. pl. 7. f. 3, 4.
Nepaul, Sylhet, Northern India. B. M.
5. *CYR. THYONNEUS*.
Papilio Thyonnesus Cramer, *Pap.* pl. 220. f. E. F.
Marpesia Thyonnea Hübner, *Verz. bek. Schm.* p. 47. n. 436.
Nymphalis Thyone Godart, *Enc. M.* ix. 361. n. 40.

- Cyrestis Thyoneus* Boisduval, *Voy. de l'Astrolabe, Entomol.* p. 117.
Amboyna, Bourou.
6. *CYR. ELEGANS* Boisduval, *Faun. Entom. de Madagascar*, p. 42. pl. 7. f. 4.; *Blanchard, Hist. Nat. Ins.* iii. 446.; *Hübner, Zutrage*, pt. 5. p. 31. f. 923, 924. (*Marpesia eleg.*)
St. Marie, Foule Pointe, Tamatave, Madagascar. B. M.
7. *CYR. COCLES*.
Papilio (N.) *Cocles* Fabricius, *Ent. Syst.* iii. pt. 1. p. 65.; *Donovan, Ins. of India*, pl. 23. f. 2.; *Godart, Enc. M.* ix. 362. (*Nymphalis C.*).
Siam.
8. *CYR. PERIANDER*.
Papilio *Periander* Fabricius, *Ent. Syst.* iii. pt. 1. p. 67.; *Godart, Enc. M.* ix. 362. (*Nymphalis P.*); *Donovan, Ins. India*, pl. 37. f. 1.; *Horsfield, Lep. Ins. of Java*, pl. 5. f. 3. 3a. (*Paphia P.*).
Mysore, Java.
9. *CYR. ACILIA* Boisduval, *Voy. de l'Astrolabe, Entomologie*, p. 117. pl. 3. f. 1, 2.
Nymphalis Acilia Godart, *Enc. M.* ix. 378.
New Guinea.

- | | |
|--|--|
| <p>10. CYR. RISA <i>E. Doubleday MS.</i>
 <i>Doubl. Westw. & Hewitson, Gen. D. Lep. pl. 32. f. 4.</i>
 Assam, Java, Moulmein. B.M.</p> <p>11. CYR. RAHRIA <i>Westw. MS.</i>
 Java (Dr. Horsfield). B.M.</p> <p>12. CYR. CAMILLUS.
 <i>Papilio Camillus Fabricius, Spec. Ins. t. 2. p. 11. n. 42.</i></p> | <p>(1781), <i>Ent. Syst.</i> iii. i. p. 62.; <i>Godart, Enc. M. ix.</i>
 361. n. 39. (Nymphalis C.)
 <i>Papilio</i> (Eq. Ach.) <i>Pantheus Drury, App. vol. ii. (1783),</i>
 vol. iii. pl. 6. f. 4.
 Sierra Leone, Ashanti, and Tropical Western Africa. B.M.</p> <p>13. CYR.? NEDUNA? <i>De Haan MS.</i>
 Java.</p> |
|--|--|

Genus XLVI. TIMETES.

TIMETES *Boisd.*MEGALURA *Blanchard.*MARPESIA *p. Hübn.*MARIUS *Swainson.*TIMETES and MARPESIA *E. Doubleday, List. Lep. B. Mus.*

BODY rather small, woolly; hind wings with long tails.

HEAD nearly as broad as the thorax, hairy.

Eyes prominent, naked.*Antennæ* about half the length of the fore wings, terminated by a rather long and gradually formed club, slightly grooved along the inside.*Labial Palpi* about twice the length of the head, directed upwards, but not extending above the level of two thirds of the height of the eyes, porrected in front, and forming when applied together a conical beak, rather flattened beneath, and clothed with short scaly hairs; the under side of the basal joint, and the extremity of the second joint above, with much longer hairs; terminal joint not distinct except on denuding the palpus, acute at the tip.

THORAX of moderate size, rather thickly clothed with woolly hairs.

Fore Wings rather elongate-trigonal. The fore margin more or less rounded. The outer margin about three fourths the length of the fore margin, more or less sinuated, and more or less angulated below the apex; the angle being very strong in *T. Coresia*, *T. Eleucha*, and especially in *T. Thetis*, whilst this margin is nearly straight in *T. Harmonia* and *T. Orsilochus*. Costal vein slender, extending to about one half the length of the costa. Subcostal vein slender; its first branch arising at nearly one third of the length of the wing from the base; second branch arising at about the same distance beyond the origin of the upper disco-cellular; the third branch arising at about three fourths, and the fourth branch arising at about seven eighths, of the length of the wing. Upper disco-cellular nearly obliterated, forming the base of the upper discoidal vein; middle disco-cellular also converted into the base of the lower discoidal vein; lower disco-cellular vein also obsolete, the discoidal cell being quite open. Median vein rather strong, its third branch arched for more than half its length.*Hind Wings* elongated, produced into a long straight tail, traversed by the outer branch of the median vein; the anal angle also produced into a short tail at the extremity of the inner branch of the median vein. Precostal vein forming a short curved spur. Costal vein much curved at its base, then straight to the outer angle of the wing. The outer margin slightly sinuated. Subcostal vein branched at a very short distance from its origin. Discoidal vein curved at its base, and united with the subcostal close beyond its branch, without any distinct disco-cellular vein, the cell being entirely open.*Fore Legs* of the male minute and pectoral. The femur clothed beneath with long, loose, white, silky hairs. Tibia nearly equal in length to the femur, slightly curved, slender, and clothed with long thin hairs, as well as the tarsus, which is not above one fourth of the length of the tibia, simple and exarticulate. *Fore Legs* of the female one third longer than those of the male, very slender. Femur nearly straight, gradually attenuated, being thickest towards the base, clothed with fine scales, and furnished beneath with a row of long fine hairs set on transversely. Tibia equal in length to the femur, nearly straight, clothed, as well as the tarsus, with very fine scales, rather dilated at the apex. Tarsus about two thirds the length of the tibia, much compressed at the extremity into a rounded palette twice the width of the base of the tarsus, armed with six pairs of small spines, each joint, except the first and last, being indicated by two pairs of these spines set on the edge wide apart; terminal joint without claws or their appendages.*Four Hind Legs* long and slender, covered with fine scales. The tibia rather shorter than the femur, also scaly, and with a few minute spines arranged in a double series. Tarsus longer than the tibia, with four rows of minute spines on the under side. Ungues small, but extending beyond the dorsal, setose, and terminal flap of the last joint of the tarsus, much curved. Paronychia bilobed and setose, the outer lobe largest and curved. Pulvillus very short, wide, and leathery.

CATERPILLAR cylindrical, with two long horns on the head, and four long erect spines on the back.

CHRYSALIS with long filiform appendages at the sides of the head and thorax, and shorter ones down the back.

This is a genus of handsome, moderate-sized butterflies, allied to *Cyrestis*, but distinguished from them by the great length of the tail of the hind wings, as well as by the style of the markings of the wings, which for the most part consist of transverse bars of darker and lighter colour. Some of the species, as *T. Marius*, *T. Coresia*, and *T. Orsilochus*, have the basal half of the under surface of all the wings of a white or pearly tint, contrasting strongly with the darker apical half. Other species have the wings more or less strongly glossed with rich purple in the males, as in *T. Iole*, *T. Æchalia W.* (from Bolivia, very closely allied to *Iole*), *T. Corinna*, and *T. Corita W.*, a Mexican species, closely allied to *Corinna*, but at once distinguished by the white fringe to the hind wings. In *T. Harmonia* the males are rich orange above, whilst the females are dark brown, with black fasciæ. According to Stoll the female of *T. Chiron* (*Marius Cr.*) differs from the male in having several small bluish white spots near the extremity of the fore wings, and at the anal angle of the hind ones; the males have, however, two bluish longitudinal stripes on the under side of the wings, which are scarcely discernible in the females.

After very careful examination I can find no structural difference (beyond a little more elongation of the fore wings) to separate *Thetys* and *Eleucha* from the other species, as has been done by Hübner and E. Doubleday. The genus thus extended agrees with Mr. Swainson's group *Marius*, a name which, having the priority, I should have adopted, had it not been established contrary to the recognised rules of nomenclature. The veining of the wings, and the structure of the palpi and legs, are identical; and it is only in the different style of their markings that a trivial difference can be traced.

The transformations of *T. Thetys* are represented by Stoll. The CATERPILLAR is cylindrical, with two very long, erect, setose, black, horn-like spines on the head, and with a long erect spine on the fifth, seventh, ninth, and eleventh segments of the body, the last being curved like the tail of some of the *Sphingidæ*. The head is dark yellow, with two black stripes; the four following segments are red brown, spotted with black; the under surface is white, and the fore legs black. The sixth and five following segments are yellow on the back, and red brown on the sides, which are marked with oblique black and white bars. It feeds on the leaves of a tree called *Cachou* in Guiana, and is transformed into a perpendicular yellow-coloured *CHRYsalis*, spotted with black, and armed with long black spines on the head and sides of the thorax, and shorter erect ones on the back of the abdomen. When the butterfly is nearly ready to appear, the yellow colour of the chrysalis becomes white.

The species are confined to the tropical regions of the New World, including the West Indian islands.

TIMETES.

Section I. *TIMETES PROPER.*1. *TIM. CORESIA.*

- Nymphalis Coresia* Godart, *Enc. M.* ix. 359. n. 31.
Megalura Coresia Blanchard in *Laporte, Hist. Nat. Ins.* iii. 447.
Marpesia Zerynthia Hübner, *Samml. exot. Schm.* Band ii. f. —.
 Brazil, Mexico. B. M.

2. *TIM. THEMISTOCLES.*

- Papilio Themistocles* Fabricius, *Ent. Syst.* iii. i. p. 66. n. 207.; *Jones, Icon.* v. t. 70. f. 2.; *Godart, Enc. M.* ix. 360. n. 33. (*Nymphalis Th.*); *Hübner Zutrage*, pt. 4. p. 8. f. 607, 608.
 Brazil. B. M.

3. *TIM. CHIRON.*

- Papilio Chiron* Fabricius, *Ent. Syst.* p. 452. n. 40., *Spec. Ins.* ii. p. 16. 60., *Ent. Syst.* iii. pt. i. p. 26. n. 78.; *Jones, Icon.* v. t. 78. f. 1, 2.; *Godart, Enc. M.* ix. 359. n. 32.
Papilio Marius Cramer, t. 200. f. D. E. ♂; *Stoll. Suppl. Cram.* pl. 30. f. 1. 1a. ♀
Marpesia Chironias Hübner, *Verz. bek. Schm.* 47. n. 439.
 Brazil, West Indian Islands, Guayaquil, Mexico, Colombia. B. M.

4. *TIM. MEROPS Boisduval* in *Cuv. R. An.* edit. Crochard. *Ins.* pl. 139. f. 1. Colombia, Bolivia. B. M.5. *TIM. HARMONIA.*

- Nymphalis Harmonia* Klug, *Neue Schmett.* t. 2. f. 3, 4.
 Var. *Doubl. Westw. & Hewitson, Genera Diurn. Lep.* pl. 32. f. 2.
 Bolivia. B. M.

6. *TIM. CRETHON.*

- Papilio Crethon* Fabricius, *Gen. Ins. Mantiss.* p. 252., *Ent. Syst.* iii. pl. 1. p. 27. n. 79.; *Godart, Enc. M.* ix. p. 361. (*Nymphalis C.*).
 Surinam, Cayenne.

7. *TIM. ORSILOCHUS.*

- Papilio Orsilochus* Fabricius, *Gen. Ins. Mantissa*, p. 254. (1776), *Ent. Syst.* iii. i. p. 27. n. 80.; *Godart, Enc. M.* ix. p. 360. f. 37.
Papilio Cinna Cramer, pl. 200. f. F. G. (1782).
Potamis mirabilis Cinna Hübner, *Samml. exot. Schm.* Bd. i. *Marius Cinna* Swains. *Zool. Ill.* 2nd. series, pl. 45.
Marpesia Cinna Hübner, *Verz. bek. Schm.* p. 47. n. 440.
 Brazil. B. M.

8. *TIM. CORINNA.*

- Vanessa Corinna* Latreille in *Humb. et Bonpl. Obs. de Zool.* ii. p. 84. t. 36. f. 5, 6.; *Godart, Enc. M.* ix. 300. n. 11.
Nymphalis Corinna Godart, *Op. cit.* ix. 360. n. 35.
 Var. *Doubl. Westw. & Hewitson, Genera Diurn. Lep.* pl. 32. f. 1.
 Colombia, Bogota. B. M.

9. *TIM. CORITA Westw.*

- Mexico. B. M.

10. *TIM. IOLE.*

- Papilio Iole* Drury, *App.* vol. iii. pl. 38. f. 2.; *Stoll, Suppl. Cram.* pl. 29. f. 4. D.
Papilio Furcula Fabricius, *Ent. Syst.* iii. i. p. 79. n. 246.; *Donovan, Nat. Repos.* v. 151.; *Godart, Enc. M.* ix. p. 360. 36. (*Nymphalis F.*).
 Jamaica. B. M.

11. *TIM. ÆCHALIA Westw.*

- Bolivia. B. M.

12. *TIM.* ? *E. Doubleday, List Lep. Brit. Mus.* p. 87.

- Honduras. B. M.

13. *TIM. PSOPHUS Boisduval MS.*

- Oaxaca.

14. *TIM. THONIS Boisduval MS.*

- Colombia.

Section II. *MARPESIA* (Athena Hübner, Petreus Swainson).15. *TIM. (MARPESIA) THETYS.*

- Papilio Thetys* Fabr. *Ent. Syst.* iii. i. 77. n. 241.; *Godart, Enc. M.* ix. 358. n. 28. (*Nymphalis Th.*); *Swainson, Zool. Ill.* 2nd ser. pl. 59. 110. (*Marius Petreus Th.*); *Hübner, Verz. bek. Schm.* p. 36. n. 308. (*Athena Th.*).
Papilio Petreus Cramer, pl. 87. f. D. E.; *Stoll, Suppl. Cram.* pl. 2. f. 2a, 2b, 2c. (larva and pupa).
Papilio Peleus Sulz. *Hist. Ins.* t. 13. f. 4.
 Brazil to Mexico. B. M.

16. *TIM. (MARPESIA) ELEUCHA Hübner, Samml. exot. Schmett.* Band ii.

- pl. —.; *Hübner, Zutrage*, pt. 1. p. 32. f. 197, 198.; *Hübner, Verz. bek. Schmett.* pt. 48. n. 437.; *E. Doubleday, List Lep. Ins. Brit. Mus.* p. 86.; *Doubl. Westw. & Hewitson, Gen. Diurn. Lep.* pl. 33. f. 3.
Nymphalis Pellenis Godart, *Enc. M.* ix. p. 359. n. 29.
 Jamaica, Cuba. B. M.

Genus XLVII. VICTORINA.

VICTORINA *Blanchard.*APHNÆUS and AMPHIRENE *Boisd., E. Doubleday.*METAMORPHA and SIPROETA *Hübner.*VANESSA and NYMPHALIS *Godt.*

BODY moderately stout; wings large, hind ones with short tails.

HEAD broad, nearly as wide as the thorax; forehead hairy, not decidedly tufted.

Eyes prominent, naked.*Labial Palpi* ascending, but not reaching the level of the top of the eyes, porrected to about twice the length of the head, flattened on the under side or front, scaly; the base beneath with short hairs; the back of the second joint also hairy as well as the inner surface, which causes their extremities to be apart, not forming a conical beak; terminal joint short, slender, and cylindrical.*Antennæ* about two fifths of the length of the fore wings, rather slender, nearly straight, with an elongated, slender, gradually formed club; with a shallow narrow groove running down the whole antennæ on the inside; apex terminated rather obliquely.

THORAX woolly; metathorax clothed with rather short hairs.

Fore Wings large, subtriangular. Fore margin much rounded. Apical margin scalloped, rather angulated below the apex, and emarginate below the angle. Inner margin nearly straight. Costal vein moderately strong, extending rather beyond the middle of the wing. Subcostal vein slender; its first branch arising at about one third of the distance from the base; second branch arising very close beyond the preceding, uniting with the costa at about three fifths of its length, its basal half running close to the continuation of the subcostal vein; third branch arising at about two thirds of the length of the wing, and extending to the tip; fourth branch arising rather beyond three fourths of the length of the wing; terminal division of the post-costal vein obliquely deflexed. Upper disco-cellular extremely short, arising close beyond the second branch of the post-costal; middle disco-cellular also short, but rather directed towards the base of the wing; lower disco-cellular obsolete, or represented by a short spur directed backwards towards the base of the wing, the cell being open, but the position of its extremity indicated by a silvery waved streak edged with black lines. Median vein strong, its third branch strongly arched at its base.*Hind Wings* rather deeply scalloped along the outer margin. The outer branch of the median vein terminating in a short distinct tail. Costal margin curved. Pre-costal vein forming a short nearly straight spur. Costal vein curved. Post-costal vein branched at one fourth of the length of the wing from the base. Upper disco-cellular vein forming the base of the discoidal vein, arising at about one sixth of an inch from the base of the subcostal branch; lower disco-cellular vein obsolete, so that the cell of the hind wing is also open. Median vein with the third branch emitted considerably beyond the base of the discoidal vein.*Fore Legs* of the male extremely small, pectoral, scaly, with lateral fringe of fine hairs. Tibia nearly as long as the femur. Tarsus not more than one third of the length of the tibia, simple, exarticulate, and destitute of claws. *Fore Leg* of the female twice the length of that of the male, and fully equal to half the length of the middle legs, slender, scaly. Femur hairy beneath. Tibia rather shorter than the femur, scaly. Tarsus about equal in length to the tibia, rather dilated at the extremity, the articulations indicated by small spines on the inside. Claws obsolete.*Four Hind Legs* long and rather slender, scaly, and thickly armed with short sharp spines, arranged both internally and on the outside of the tibia in rows. Tibial spurs rather strong. Tarsus longer than the tibia, with several rows of strong spines beneath, and a few scattered on the back of the basal joints. Claws large, strong, and hooked, nearly as long as the terminal fringe of setæ, arising on the upper extremity of the last joint. Paronychial well defined, bifid; the outer lacinia as long as the claw, slender, obtuse; the inner one smaller, more acute, finely setose.

ABDOMEN smaller and shorter than the thorax.

This genus is nearly allied to *Timetes*, from which it differs in the larger-sized wings, the shorter tails, the more spinose legs, and the more gaping extremity of the palpi. I can discover no character to separate *Stelenes* from the other species, all agreeing together in the general form of the wings, antennæ, palpi, and also in the curious, slender, silver marking, indicating the position of the extremity of the discoidal cell. *V. Stelenes* possesses, however, a little spur running into the discoidal cell, from the extremity of the middle disco-cellular vein, which is absent in *V. Epaphus*. M. Boisduval, in his MS., unites *P. Sulpitia* of Cramer (which I have given under the genus *Pyrrhogyra*, ante, p. 253.) in the same genus with *Stelenes*, to which it certainly bears considerable affinity in its markings.

The description given by Fabricius of the LARVA of *V. Stelenes* is taken from Madame Merian, whose figure clearly represents

Colænis Dido (ante, p. 149.). As the description of this larva is omitted in the page just referred to, it may here be stated that it is green, with white and red striæ, and has the tail armed with two spines.

The species of this genus inhabit Tropical America, from Brazil to Mexico.

VICTORINA.

1. VICT. STELENES.

- Papilio Stelenes* Linn. *Syst. Nat.* ed. x. p. 465. n. 39.;
Clerck, Icon. t. 35. f. 2.; *Linn. Mus. Lud. Reg.* p. 218.
 n. 37.; *Linn. Syst. Nat.* ed. xii. v. 2. p. 750. n. 30.
 (P. *Sthenelus*); *Petiver, Gaz.* 20. t. 13. f. 1. (*Papilio*
Jamaicensis, &c.); *Sloane, Jamaica*, 2. p. 217. t. 239.
 f. 9, 10.; *Fabricius, Ent. Syst.* iii. i. p. 84. n. 263.;
Cramer, Pap. t. 79. f. A. B.; *Godart, Enc. M.* ix. 378.
 n. 95. (*Nymphalis* St.); *Lucas, Hist. Nat. Lep. exot.*
 pl. 67. f. 2.
Metamorphia Sthenele Hübner, *Verz. bek. Schm.* n. 382.
Aphnæus Stelenes Boisduval MS.
Victorina Steneles Blanchard in *Laporte, Hist. Nat. Ins.*
 iii. p. 447.; *E. Doubleday, List. Lep. Brit. Mus.* p. 86.;
Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 33. f. 1.

Papilio (Eq. Ach.) *Lavinia* Fabr. *Ent. Syst.* iii. pt. 1. p.
 22. n. 64.

Brazil, Guiana, Surinam, Jamaica.

B. M.

2. VICT. EPAPHUS.

- Vanessa Epaphus* Latreille in *Humboldt et Bonpl. Obs.*
Zool. ii. t. 35. f. 3, 4.
Vanessa Epaphea Godart, *Enc. M.* ix. 299. n. 10.; *Godt.*
Op. cit. p. 379. n. 96. (*Nymphalis* Ep.).
Amphirene Epaphus Boisduval MS.; *E. Doubleday, List*
Lep. Brit. Mus. p. 86.; *Doubl. Westw. & Hewitson,*
Gen. Diurn. Lep. pl. 33. f. 2.
 South America, Mexico.

B. M.

3. VICT. TRAYJA *E. Doubleday, List Lep. Bri. Mus.* p. 86. (*Amphirene* Tr.)
Siproeta Trayja Hübn. *Samml. exot. Schm.* Bd. ii. pl. —.
 Brazil.

B. M.

Genus XLVIII. MINETRA.

MINETRA *Boisd.*

PARTHENOS *Hübner, Verz. bek. Schmett.*

NYMPHALIS *Godt.*

BODY robust; abdomen small; wings elongated.

HEAD broad, hairy, without a frontal tuft.

Eyes large and naked.

Labial Palpi compressed, parallel, not forming a conical projecting beak, directed upwards. The terminal joint nearly erect, and elevated to the level of the top of the eyes, thickly clothed with short scaly hairs, and with longer loose hairs on the whole of the front surface of the middle joint, and with a tuft of hairs at the extremity of the upper side; terminal joint small and conical.

Antennæ half the length of the fore wings, nearly straight, terminated by a very long and slender, gradually formed club, slightly grooved on its interior lower surface.

THORAX robust, thickly clothed with short woolly hairs, and marked with transverse bars of different colours.

Fore Wings elongate triangular. Fore margin slightly arched. Apical margin three fourths of the length of the anterior, scarcely emarginate, and slightly scalloped, inner angle rounded, not much more than half the length of the fore margin, very slightly emarginate. Costal vein strong, and extending more than two thirds the length of the wings. Subcostal vein slender; its first branch arising at the distance of one fourth of the length of the wing from the base; the second branch arising at two fifths of the length of the wing, beyond which for a short distance the subcostal vein is a little deflexed, it then runs parallel with the costa, until the branching off of the third branch at the distance of two thirds from the base of the wing; which is immediately followed by the branching off of the fourth branch. The upper disco-cellular vein is almost obsolete, it branches off from the subcostal nearly at half the length of the wing, just beyond the origin of the second branch of the subcostal; middle disco-cellular vein short, straight, and rather oblique, being directed from the side of the costa towards the base of the wing; the lower disco-cellular vein much longer, obliquely arched, so that it closes the discoidal cell by uniting with the median vein close beyond the origin of its third branch (being preceded on the upper surface of the wing by a slender, arched, black line, dividing the second white subcostal patch into two irregular-shaped portions). Median vein strong; its third branch strongly angulated at about one third of its length from its origin. Submedian vein considerably curved.

Hind Wings subquadrangular ovate. Costal margin nearly straight. Outer margin rather deeply scalloped, with the portion between the first and third branches of the median vein somewhat prolonged. Anal angle rounded. Precostal vein distinct from the base, throwing off a forked branch towards the costa immediately before its junction with the costal vein, which is considerably arched. Subcostal vein branched at not more than one eighth of an inch from its base. Upper disco-cellular curved at its base, which is at about the same distance from the base of the branch of the subcostal vein; outer disco-cellular slightly arched, closing the short and narrow discoidal cell with an acute point, terminating at the base of the third branch of the median vein.

Fore Legs of the male small, pectoral, very hairy. Tarsus about half the length of the tibia, slender, cylindrical,

simple, exarticulate. *Fore Legs* of the female small, not much longer than those of the male, rather slender, scaly. Femur beneath with long hairs. Tibia as long as the femur, with delicate setæ on the outside. Tarsus nearly as long as the tibia, slightly dilated towards the apex, with the articulations distinguished by slightly elongated spines beneath; the basal joint about three fourths the length of the limb; apex destitute of claws.

Four Hind Legs moderately long and strong, scaly, and very much spined. The middle tibiæ with a patch of short incurved hairs on the under side near the base; spines on the under side of the tibiæ forming two rows. Tibial spurs long. Tarsi more numerous spined, especially at the sides, where the spines form longitudinal rows, beneath with two rows of smaller spines, except on the terminal joint. Claws large, hooked, as long as the setæ at the extremity of the upper side of the last joint of the tarsus. Paronychialia with two divisions, the outer nearly as long the claw, slightly curved, finely setose; inner lacinia shorter, obtuse. Pulvillus broad, short.

ABDOMEN small, rather slender.

TRANSFORMATIONS unknown.

The handsome insects forming this genus are distinguished from the preceding by the almost erect labial palpi, the very slender club to the antennæ, the elongated base to the first branch, and the close proximity of the third and fourth branches of the post-costal vein; the much angulated third branch of the median vein, and the well developed precostal vein of the hind wings. A peculiarity is to be observed in the markings of the upper surface of the *Gambrizius* and *Sylvia*, namely the extension of several of the black bars at the base of the wings across the thorax and base of the abdomen. The markings on the under side of the wings resemble those of the upper, but they are much less decided; those of the base of the wings being obliterated, and the colours on this side are much less brilliant.

The species are natives of India, and the islands of the Indian Ocean.

In strictness probably Hübner's name *Parthenos* ought to be applied to the genus, but as Boisduval's name has been used in the Plate it may be retained, although in this as in many other instances which have already occurred in our pages, the only merit which either of these authors possesses is that of having pointed out certain groups which appear distinct, but of which no essential or detailed characters have been published till the present time, and which, consequently, their proposers have not tested by analysis.

I have little doubt that it will ultimately be ascertained that *M. Gambrizius* and *Sylvia* are only local varieties of one species.

MINETRA.

1. MINETRA SYLVIA.

Papilio Sylvia Cramer, *Pap.* pl. 43. f. F. G.; *Hübner, Verz. bek. Schmett.* p. 38. n. 335. (*Parthenos* D.); *Blanchard in Lap. Hist. Nat. An. Art.* III. p. 448. (*Phyllophasis* S.); *Boisduval, Entomol. Voy. de l'Astrolabe*, p. 127. (*Minetra* S.); *E. Doubleday, List Lep. Brit. Mus.* p. 86. (*Minetra* S.).
Nymphalis Sylvina Godart, *Enc. M.* ix. 381. n. 103.
Java, Coromandel, Amboyna, New Guinea. B M.

2. MINETRA GAMBRISIUS.

Papilio Gambrizius Fabricius, *Ent. Syst.* III. i. p. 85. n. 264; *Donovan, Insects of China*, pl. 38.; *E. Doubleday, List Lep. Brit. Mus.* p. 86.; *Doubl. Westw. & Hewitson, Gen. Diurn. Lep.* pl. 51. f. 2.
East India, Moulmein, Assam. B.M.

3. MINETRA NODRICA Boisduval, *Voy. de l'Astrolabe, Entomologie*, p. 126.
New Guinea, Bourou.

Genus XLIX. PROTHOE.

PROTHOE Hübner.
AUTONEMA Boisduval.
PAPHIA p. Horsfield.

BODY small and rather slender; wings large, hind ones slightly tailed; palpi applied close to the face.

HEAD as broad as the thorax, clothed with short hairs, and destitute of a frontal tuft.

Eyes large and naked.

Antennæ very nearly half the length of the fore wings, straight, slender, terminated by a long, very slender, and gradually formed club, slightly grooved.

Labial Palpi short, erect, rather compressed, scaly; the inside furnished with short hairs, so that the tips are not applied close together but slightly incurved. Basal joint not furnished with long hairs; extremity of the second joint hairy on the side applied to the face; terminal joint small and conical.

THORAX small, woolly; tippets very small; metathorax slightly hairy.

Fore Wings large, triangular. Fore margin slightly rounded. Apical margin three fourths of the length of the anterior, nearly straight, very slightly scalloped. Inner margin the same length as the apical one, nearly

straight. Costal vein strong, extending to half the length of the costa. Discoidal cell extending to the length of two fifths of the base of the wings. Subcostal vein slender, with its first branch arising at about one third of the length of the wing; second branch arising a little beyond, and extending to about four fifths of the length of the costa, beyond this second branch the subcostal vein is obliquely deflexed for a short distance (to the branching off of the disco-cellular vein); the third and fourth branches rise almost close together near the middle of the vein, the third running in a bent manner to the tip of the wing, and the fourth also bent, running into the apical margin. The upper disco-cellular vein is very short and oblique; the middle one is short and transverse; and the outer one is curved in an oblique direction outwards, joining to the third branch of the median vein at some little distance beyond its origin, this branch is but little curved at its base. Submedian vein scarcely curved.

Hind Wings somewhat oval, the space between the extremities of the second and third branches of the median vein being produced into a short, broad, outwardly curved tail. Costal margin curved. Outer margin nearly straight from the outer angle to the tail, from the tail to the anal angle it has two rather deep scallops. Precostal vein reduced to a short, straight, transverse spur arising near the base of the subcostal vein, and extending to the costal margin. Subcostal vein branched at a short distance (not more than one seventh of an inch) from its base. Disco-cellular forming the base of the discoidal vein, and branching from the subcostal at a still shorter distance; the outer disco-cellular wanting, so that the cell, which is long and narrow, is open. Median vein branched considerably below the branching off of the discoidal vein, its second and third branches extending to either side of the short tail.

Fore Legs of the male very short and pectoral, thickly clothed to the tip with short hairs. The tibia shorter than the femur. Tarsus fully as long as the tibia, cylindrical, simple, exarticulate, and destitute of claws. *Fore Legs* of the female short, scaly. Tibia about two thirds of the length of the femur. Tarsus as long as the tibia, internally dilated at the extremity, where it is obliquely truncate, with slight indications of the joints.

Four Hind Legs moderately long, and rather thickly clothed with scales; the tarsus being nearly as thick as the tibia. Femur a little curved, thickest at the base. Tibia as long as the femur, straight, furnished on the under side with two rows of short spines. Tarsus of the same length as the tibia, rather thickly beset with short spines, especially on the under side, where they form several distinct rows. Claws small, slender, sickle-shaped. Paronychialia with the outer division as long as the claws, slender, rather pointed and setose; inner division shorter and more obtuse. Pulvillus small, broadly heart-shaped.

ABDOMEN small.

TRANSFORMATIONS unknown.

The beautiful insect upon which this genus is founded is well distinguished, not only by the peculiar character of its colours, but by its short palpi closely applied to the face, the slender club to its antennæ, and the great and nearly equal length of the third and fourth branches of the subcostal vein of the fore wings, which run close together for a considerable distance, and then widen, seeming to take the place of the fourth branch and terminal division of the subcostal vein, as arranged in *Cyrestis*, *Timetes*, &c. The colouring of the under surface of the wings is still more remarkable and equally beautiful, the ground colour being a very pale buff marked with a vast number of spots and angulated lines of different forms, of deeper or lighter shades of brown, with several green and orange spots near the anal angle. The hind wings beyond the middle are also marked with an irregular series of very finely powdered arches.

PROTHOE.

1. PROTHOE FRANCKII.

Nymphalis Franck. *Godart, Enc. M.* ix. p. 825.; *Hübner, Samml. exot. Schm.* Band ii. pl. —. (*Prothoe* Franckii); *E. Doubleday, List Lep. Brit. Mus.* p. 88.; *Doubl.*

Westw. & Hewitson, Gen. Diurn. Lep. pl. 51. f. 3.; *Horsfield, Lep. of Java*, t. 5. f. 4, 4a. (*Paphia* Fr.). *Autonema* Franckii *Boisduval MS.*

Java.

B. M.

Genus L. MYNES.

MYNES *Boisduval, Guérin-Ménéville.*

NYMPHALIS *Guérin-Ménéville.*

BODY rather robust; wings strong.

HEAD moderate.

Eyes naked.

Antennæ rather long, nearly straight, and rather slender; terminated by a long, gradually formed, and slender, straight club.

Labial Palpi slightly porrect, directed upwards, and elevated nearly to the level of the top of the head; not

August 1. 1850.

4 B

compressed; hairy on the inside of the extremity of the second joint, with fine scaly hairs on the outside and beneath. Terminal joint small and conical, much more slender than the preceding joint when covered with its scales.

THORAX oval, clothed with flossy hairs on the metathorax.

Fore Wings rather large and wide. Anterior margin slightly rounded. Apical margin about two thirds of the length of the anterior, entire, slightly rounded. Inner margin nearly straight. Costal vein extending to about two fifths of the length of the costa; first and second branches arising close together, at about one third of the length of wing; third branch arising about the middle of the wing, and extending nearly to the tip of the costal margin; fourth branch emitted very near the tip of the wing; the vein itself is deflexed and slightly angulated just beyond the base of its second branch, where the upper disco-cellular vein is emitted, which is very short and very oblique. The middle and lower disco-cellular veins are in the same line, and in an oblique direction; the middle one very short, and the lower one more elongated, uniting with the third branch of the median vein at a little distance from its origin, and closing the discoidal cell with an acute point at a little distance before the middle of the wing, the third branch itself being angulated at the point of union.

Hind Wings broadly subtriangular, furnished with a short obtuse tail directed outwardly; or rather the space between the extremity of the discoidal vein and the third branch of the median vein is very deeply emarginate. The costal margin rounded towards the base. The outer margin regularly rounded from the outer angle to the extremity of the third branch of the median vein, which extends along the outside of the short tail, from which point to the anal angle the outer margin of the wing is scalloped. Precostal vein short and arched. Costal vein curved, extending to the outer angle of the wing. Subcostal vein branching at about one fourth of its length from the base, and emitting the discoidal vein close to the base of its branch; the upper disco-cellular forming the base of the discoidal vein, and being slightly curved; the lower disco-cellular obsolete, so that the cell is entirely open. Third branch of the median vein but little curved at the base.

Fore Legs of the female (the only sex which I have seen) short, pectoral, thickly clothed with scales. Femur nearly straight, with numerous rather scaly hairs on the under side. Tibia nearly as long as the femur, slightly curved, squamose. Tarsus about three fourths of the length of the tibia, and rather narrower than it, subcompressed; basal joint occupying two thirds of the base, the remaining one third occupied by the articulations which are suboblique, indicated on the under side by short spines seen beyond the scales; terminal joint destitute of claws and pulvilli.

Four Hind Legs long and strong. Femur very squamose, curved. Tibia as long as the femur, more finely squamose, and furnished with a few irregularly placed, short, acute, and slender spines; tibial spurs very short. Tarsus equal in length and nearly equal in thickness to the tibia; basal joint rather more than half the entire length, finely squamose, the under side armed with several rows of numerous, small, sharp, and slender spines. Claws rather large, very much hooked, and very acute at the tips. Paronychialia with the outer lobe as long as the claw, slightly curved, and obtuse at the tip, finely setose; inner lobe shorter, curved towards the outer, acute. Pulvillus broad, dilated at the extremity, leathery.

ABDOMEN scarcely longer than the thorax.

The few species of butterflies of which this hitherto uncharacterised genus is composed are very rare in collections, and are natives of some of the islands of the Eastern Ocean. They bear considerable resemblance in the form of their wings to *Argynnis Egista*, as well as to *Prothoe Frankii*, to which latter they are certainly closely related, differing from it, however, in having the fourth branch of the subcostal vein of the fore wings arising near the tip of the wing, instead of close to the third as in that genus; the straight but oblique direction, also, of the disco-cellular veins produces a differently formed termination to the discoidal cell, the extremity of which is irregular in *Prothoe*. The colouring of the under side of the wings (which affords a character to which too little importance has been given) is very remarkable. The fore wings are nearly coloured as above; but they have, in addition to the subapical yellow spots, a patch of red near the middle of the apical margin. The hind wings are dark brown on the disc, glossed with purple towards the costa, and with a band of yellow lunate marks preceding the outer margin, thus differing entirely from the elaborate markings of *Prothoe Frankii*. *Mynes Leucis* has the upper surface of the wings blue black, the fore ones with two rows of yellowish spots, and the hind ones with a discoidal patch of yellowish; the under side of the fore wings has a number of white dots, the hind wings are spotted with white at the base, and the disc is marked with three flexuous interrupted strigæ of a whitish green.

MYNES.

1. M. LEUCIS *Boisduval, Voy. de l'Astrolabe, Entomologie*, p. 129.; *Guérin-Ménéville, Voy. de la Coquille, Zool. Ins.* p. 279.
Nymphalis Australis Guérin-Ménéville, Voy. de la Coquille, Insectes, pl. 14. bis f. 4.
Offack, Papua.

2. M. GEOFFROYII.
Nymphalis Geoffroyii Guérin-Ménéville, Voy. de la Coquille, Ins. pl. 16. f. 1.; *Boisduval, Voy. de l'Astrolabe, Entomologie*, p. 130. n. 2.
Offack, Papua.

B. M.

Genus LI. **IAERA.***IAERA* Hübn.*LIMENITIS* p. *E. Doubleday.**EVENA* and *LIMENITIS* p. *Boisd.**NYMPHALIS* Godt.

BODY rather slender; head large; fore wings long; hind wings rather broad but short.

HEAD large, nearly as broad as the thorax, hairy on the crown, without a decided frontal tuft; head of the female rather smaller.

Eyes very large and prominent in both sexes, naked.

Antennæ very long, nearly equal to two thirds of the length of the fore wings, and also equal to the entire body, slender, nearly straight; terminated by an elongated, slightly curved, and gradually formed club, with a slender keel along the inner edge.

Labial Palpi small, slender, directed upwards, scarcely projecting more than one third of the length of the head, but with the tip elevated rather above the level of the top of the eyes, thickly clothed with short hairs. Basal joint short, curved, and furnished with longer hairs on the under side; middle joint elongate, slender, somewhat compressed, with a slight elongated tuft of short hairs on the upper side next the face; terminal joint very short, slender, and acute at the tip.

THORAX small, oval, finely hairy, slightly tufted at the sides of the metathorax.

Fore Wings long, narrow. Fore margin considerably arched, apical angle rounded. Apical margin scarcely more than half the length of the fore margin, slightly convex, and very slightly sinuated. Inner margin two thirds of the length of the latter, slightly convex from the base to beyond the middle, subemarginate towards the anal angle. Costal vein extending nearly to three fifths of the length of the fore margin, to which it is united by an angle. Subcostal vein slender; the first branch emitted before the anterior extremity of the discoidal cell, and extending to three fourths of the length of the fore margin; the second branch emitted considerably beyond the discoidal cell, rather beyond the point of union of the costal vein with the costa; second, third, and fourth branches arising at equal distances apart, the fourth being as long as the space between its base and that of the third subcostal branch. Upper disco-cellular vein almost obsolete, emitted from the subcostal vein just beyond the origin of the first subcostal branch. Middle disco-cellular short, slightly arched, and forming a continuous line with the lower disco-cellular, which is considerably elongated, oblique, quite distinct, and united to the third branch of the median vein at a little distance from its base, closing the discoidal cell with a rather obtuse point. Median vein and its branches strong and wide apart, the third branch considerably arched.

Hind Wings broad, short, subtriangular. Fore margin nearly straight, but much curved at the base; outer angle rather acute. Apical margin slightly sinuated, and very slightly convex. Precostal vein short, nearly straight. Subcostal vein branching at about one fourth of the length of the wing from the base. Upper disco-cellular vein forming the curved base of the discoidal vein, and arising very near the branch of the subcostal vein. Lower disco-cellular wanting, the discoidal cell being open and narrow. (It is, however, distinct but very slender in *I. Cænobita*, arched, and arising at a little distance from the subcostal branch, and uniting with the third median branch at a little distance from its origin.)

Fore Legs of the male very small and slender, pectoral; clothed from the base to the extremity with long, slender, white hairs. Tibia slightly curved, as long as the femur. Tarsus nearly as long as the tibia in *I. Crithea*, but very short in *I. Cænobita*. *Fore Legs* of the female small, denuded of long hairs; with the tarsus about two thirds of the length of the tibia, slightly dilated, and obliquely truncate at the tip, with short spines indicating the tarsal joints.

Four Hind Legs very long and slender. Femur finely squamose. Tibia clothed with narrow scales, and armed, especially beneath, with numerous short spines. Tibial spurs long and slender. Tarsus long, thickly armed beneath with short spines, those of the apical joints nearly equal to the following joints in length. Claws very much curved, acute, and slender, dilated at base. Paronychial bilobed; outer lobe as long as the claw, setose. Pulvillus very short and broad.

ABDOMEN slender and elongated, marked with pale transverse fasciæ.

TRANSFORMATIONS unknown.

The extraordinary length of the antennæ and legs, the almost recurved very acutely tipped labial palpi, the elongated fore wings, the larger head, and the arrangement of the branches of the subcostal vein of the fore wings, are the chief characteristics which have induced me to separate these insects from *Limenitis*, with which they have been united by Boisduval and E. Doubleday, and to which

I have restored Hübner's name *Iaera*, which he gave to the two insects mentioned below, to which he added *P. Afra Drury*, which belongs to the genus *Aterica*.

The species inhabit tropical Western Africa, and differ considerably in the style of their colouring; *I. Crithea* having dark brown wings with paler buff-coloured markings, the hind wings having a broad bar of buff; whilst *I. Cænobita* has black-coloured wings with bluish-white transverse bars, more like the typical *Neptides*, to which indeed it more closely approximates, especially in the very minute size of the tarsi of its fore legs. *I. Crithea* bears a very great resemblance to some species of *Adolias*, especially those of the subgenus *Euryphene* of Boisduval.

IAERA.

1. *IAERA CRITHEA* Hübner, *Verz. bek. Schm.* p. 38. n. 333.
Papilio Crithea Drury, Illust. vol. ii. pl. 16. f. 5, 6. and
Appendix; *Fabricius, Ent. Syst.* iii. pt. 1. p. 132. n.
406.; *Cramer, Pap.* pl. 138. f. C.D.
Limenitis Crithea E. Doubleday, List. Lep. Brit. Mus.
p. 93.
Nymphalis Opis var. γ . *Godart, Enc. M.* ix. p. 381. n.
104.
? ♀ *Papilio Opis Drury, Ill.* vol. ii. pl. 17. f. 5, 6. and
Appendix; *Cramer, Pap.* pl. 138. f. A.B.

Nymphalis Opis Godart, Enc. M. ix. p. 381. n. 104.
Sierra Leone. B.M.

2. *IAERA CÆNOBITA* Doubl. *Westw. & Hewitson, Gen. D. Lep.* pl. 43. f. 2.
Papilio Cænobita Fabricius, Ent. Syst. iii. pt. 1. p. 247.
n. 769.; *Jones, Icon.* v. t. 27. f. 2.; *Donov. Ins. of*
India, p. 53. pl. 35. f. 3. (edit. Westw.)
Nymphalis Cænobita Godart, Enc. M. ix. p. 433. but not
of Cramer.
Limenitis? Cænobita E. Doub. List. Lep. B. M. p. 93.
Sierra Leone. B.M.

Genus LII. NEPTIS.

NEPTIS Fabricius (Systema Glossatorum), Horsfield.
LIMENITIS p. *Boisd., Doubleday.*
ACCA Hübn.
NYMPHALIS Godt.

BODY slender; fore wings long; antennæ short; palpi small, hairy, and very acute.

HEAD rather broad, with a frontal tuft.

Eyes large, prominent, and naked.

Antennæ rather short, not half the length of the fore wings; terminated by a short, slender, gradually formed club, the tip of which is curved outwardly, finely keeled beneath.

Labial Palpi small, directed obliquely upwards, scarcely reaching above the level of the middle of the eyes. The terminal joint in the same line as the preceding, compressed, clothed with long loose hairs along the whole of the fore edge, and also on the hinder side at the extremity of the second joint; basal joint short; second joint broader and slightly curved at the base; terminal joint, in the typical species, nearly as long as the preceding, slender, and very acute at the tip.

THORAX rather slender, scarcely broader than the head, oval, very slightly hirsute, often clothed with metallic scales.

Fore Wings elongate, triangular. The anterior margin very slightly arched; apical angle rounded. Apical margin rounded, not, or but slightly, sinuated. Inner margin three fourths of the length of the anterior, more or less emarginate towards the middle. Costal vein moderately strong, not extending to the middle of the costa. Subcostal vein slender; its first branch arising at about one third of the length of the wing, and uniting with the costa a little beyond the middle; second branch, in the typical species, arising close beyond the first, before the anterior extremity of the discoidal cell; third branch arising at about two thirds of the length of the wing and extending to the tip; fourth branch arising at about three fourths of the length of the wing and reaching to the apical margin below the apex, the apical portion of the vein being deflexed. Upper disco-cellular vein almost obliterated, arising close beyond the origin of the second subcostal branch. Middle disco-cellular short, arched towards the base of the wing in the typical species. Lower disco-cellular obsolete, so that the discoidal cell is open, its place often indicated by a dark bar having a slightly curved paler line dividing the pale discoidal patch into two parts, and extending to the median vein just before the origin of its third branch, which is slightly arched.

Hind Wings very oval. The costal margin much arched. The outer margin rounded, slightly scalloped. Precostal vein forming a short straight spur forked at its extremity. Costal vein slightly curved, reaching only to the middle of the costal margin. Subcostal vein arising from the costal just beyond the origin of the precostal, and emitting its branch almost at its base. The upper disco-cellular forming the curved base of the discoidal vein. The lower disco-cellular wanting, so that the narrow discoidal cell is open. Median vein branching below the branches of the subcostal vein, with the spaces between the extremities of the branches along the outer margin of the wing wider than usual, in consequence of the costal vein extending only to the middle of the costa.

Fore Legs of the male very slender and short, more or less clothed with very delicate white hairs. Femur

slightly curved; tibia scarcely half its length. Tarsus very short, not above one third of the length of the tibia, forming a minute, oval, exarticulate joint, destitute of claws. *Fore Legs* of the female more robust, and much longer than those of the male, scaly, with but few fine hairs. Femur slightly curved. Tibia also a little curved, about two thirds of the length of the femur. Tarsus nearly as long as the tibia, well articulated; the basal joint half the length of the tarsus, the remainder rather dilated, with strong spines on the inside; the terminal joint minute, spined, but without claws.

Middle and Hind Legs rather short, scaly. Tibia spined beneath, with long tibial spurs. Tarsus with four rows of strong spines beneath. Claws rather long and very much bent, and acute at the tip. Paronychia and pulvillus small.

ABDOMEN slender, elongated.

LARVA slightly elongated; head armed above with two short conical points; second and third segments of the body with a pair of diverging, obtuse, setose, fleshy spines, the hinder pair being the largest; an erect tubercle near the extremity of the body.

CHRYsalis with the head bifid, and with the base of the abdomen-case much swollen.

The peculiar character of the colouring of several of the typical species of this, as well as of some of the preceding and following genera, consisting of three transverse, more or less interrupted, white or pale-coloured bands running across the wings (as shown in the upper figures of our Plates XXXIV. and XXXV.), have made me long hesitate as to the propriety of generically separating the insects by which they are exhibited. But although it cannot be denied that uniformity in the general character of the markings of an extensive series of species ought usually to be considered as indicative of generic affinity, yet an investigation of the structural characters of the insects now before us has, from their superior importance, shown the necessity of separating them into at least three genera. Fabricius, indeed, long ago proposed the genus *Neptis*, which I have here adopted, giving *Melicerta* and *Aceris* as his types; but his characters were taken from the structure of the palpi alone, and, except by Dr. Horsfield in his List of the Genera of Diurnal Lepidoptera, published in the first part of his work on the Butterflies of Java, the genus *Neptis* has been entirely sunk. His character of the slender and very acute hairy palpi is, however, accompanied by two other peculiarities, which have led me to resuscitate the genus in its present limits, namely the non-extension of the costal vein of the hind wings beyond the middle of the costa (a circumstance not occurring in any of the neighbouring groups), and the extreme minuteness of the tarsi of the fore legs of the males. Dr. Horsfield, indeed, appears to have been chiefly guided by the form of the larva in his short treatment of this genus, which, it is proper to add, he has not described in detail. Thus he gives as an illustration of the imago a species which he names "*Neptis Vikasi*," which has not the structure of the palpi, nor the arrangement of the veins in the hind wings of the species with acute palpi. His dissections of the Javanese species, which he names "*Neptis Aceris*?" (plate VII. fig. 9, 9a—9h.), agree with the characters above laid down; but in his Generic List, as well as in the definition of his third plate (containing the remarkable progressive diagram of the forms of the larvæ of the Diurnal Lepidoptera), he has mentioned a new genus, allied to *Limenitis* in the normal series of Chilopodiform genera, figuring the same larva of "*Neptis Aceris*?" as its example, although he had given *Neptis* as an aberrant genus of the group. He has moreover given figures from Rösels of the transformations of *Papilio Populi Linn.*, which he describes as "*Neptis*?" apparently from the general similarity between its larva and that of *Neptis Aceris*?; and at the same time has given *Procris* and *Leucothoe* as illustrations of another genus, to which he applies the name of *Biblis* (proposed by Fabricius in the *Systema Glossatorum* with *P. Biblis* as its type, which, from the heterogeneous nature of its contents, it will be advisable either to suppress or to restrict to its typical species, as has been done by Godart, viz. *Biblis Thadana Godart*, *Didonis Biblis Hübner*); so that the genus *Limenitis* appears restricted by Dr. Horsfield to *P. Sibilla*, of which he gives a figure of the larva from Rösels, which, however, from comparison with Hübner's figure of the larva of *P. Camilla* copied by Curtis and Boisduval, must be very inaccurate.

The species of this genus, as here restricted, appear to be confined to Asia and the Indian Islands, Western Africa, Madagascar, and Mauritius. The pretty species forming my first section are of small size, and marked with orange-coloured spots and bars on a dark brown ground; the second section comprises larger insects, having white or whitish spots on a black or blackish ground. There are several undescribed species of the genus in our collections.

NEPTIS.

Section A. *Wings spotted with orange. Fore wings with the second branch of the subcostal vein arising considerably beyond the extremity of the discoidal cell.*

Subsection a. *All the wings without a transverse orange bar in the middle.*

1. NEPTIS FROBENIA.

Papilio Frobenia Fabricius, Suppl. Ent. Syst. p. 425. n. 400, 401.; Godart, Enc. M. ix. p. 430. n. 254. (Nymphalis Fr.); Boisduval, Faune Ent. de Madag. p. 51. (Limenitis Fr.)

Pantoporia Frobenia Hübner, Zutr. pt. 4. p. 38. f. 773, 774.

Mauritius, Madagascar.

B. M.

2. NEPTIS DUMETORUM.

Limenitis Dumetorum Boisduval, Faune Ent. de Madag. p. 50. pl. 7. f. 6.; Doubleday, List Lep. B. M. Append. p. 25.

Madagascar, Isle of Bourbon.

B. M.

Subsection b. *All the wings with a transverse bar in the middle.*

3. NEPTIS HORDONIA.

Papilio Hordonia Stoll, Suppl. Cram. t. 33. f. 4. 4 D.;

August 1. 1850.

Godart, Enc. M. ix. 429. n. 253.; E. Doubleday, List Lep. B. M. p. 93.

Java, East India (not Guinea).

B. M.

4. NEPTIS HELIODORE.

Papilio Heliodore Fabricius, Ent. Syst. iii. pt. 1. p. 130. n. 401.; Jones, Icon. iv. t. 76. f. 2.; Godart, Enc. M. ix. 429. n. 252? (Nymphalis Heliod. but not Heliodore of Cramer, pl. 212. f. E. F.)

Penang, Java, Siam.

B. M.

Section B. *Wings generally spotted with white. Fore wings with the second branch of the subcostal vein arising before the extremity of the discoidal cell.*

5. NEPTIS ACERIS.

Papilio Aceris Esper, Pap. t. 81. f. 3. 4. (minor ex Hungaria); Ernst, Pap. 1. pl. 11., Suppl. iii. f. 12. a—d. bis; Fabricius, Ent. Syst. iii. pl. 1. p. 245. n. 763.; Godart, Enc. M. ix. p. 430. n. 255. ex parte (Nymphalis Ac.); Hübner, Verz. bek. Sch. p. 44. n. 393. (Aca Aceris); Boisduval, Icon. Hist. t. 18. f. 2., Ind. Meth. p. 16. n. 119. (Limenitis Aceris).

- Papilio Plautilla* *Hübner, Europ. Schmett. Pap. f.* 99, 100.
Germany, Hungary, South Russia. B.M.
6. NEPTIS MATUTA.
Acca Matuta *Hübner, Verz. bek. Schm. p.* 44. n. 392.
Papilio Leucothoe *Cramer, Ins. pl.* 296. f. E. F. (but not of Linnaeus.)
Nymphalis Aceris (ex parte) *Godart, Enc. M. ix. p.* 430. n. 255.
Papilio Aceris *Esper, Pap. t.* 82. f. 1. (major ex India.); *Fabricius, Ent. Syst. iii. pt. 1. p.* 245. n. 763. (ex parte); *Esper, Ausl. Schmett. t.* 81. cont. 31. f. 3, 4.
Java, China, Coromandel. B.M.
7. NEPTIS COLUMELLA.
Papilio Columella *Cramer, Ins. pl.* 296. f. A. B.
Acca Columna *Hübner, Verz. bek. Schmett. p.* 44. n. 391.; *Doubleday, List Lep. B. Mus. p.* 95.
China, Nepal, India. B.M.
8. NEPTIS LUCILLA.
Papilio Lucilla *Wiener Verz. 173. 4.; Fabricius, Ent. Syst. iii. pt. 1. p.* 246. n. 768.; *Ernst, Pap. i. pl.* 10. f. 12. a. b.; *Godart, Enc. M. ix. p.* 431. n. 259. (*Nymphalis* L.); *Hübner, Pap. f.* 101, 102., *Verz. bek. Schmett. p.* 44. n. 394. (*Acca Lucilla*); *Boisduval, Gen. et Ind. Meth. p.* 16 (*Limenitis* L.)
Papilio Camilla *Esper, Pap. t.* 59. f. 1.
Papilio Sappho *Pallas, Iter, i. App. p.* 19. n. 62.
Papilio Ccenobita *Cramer, Ins. pl.* 296. f. C. D. (but not of Fabricius and Donovan).
Austria, South Russia, Wolga, China, Cramer. B.M.
9. NEPTIS ZAIDA.
Limenitis Zaida *E. Doubleday MS.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl.* 35. f. 3.
Northern India. B.M.
10. NEPTIS MELICERTA.
Papilio Melicerta *Drury, Illust. vol. ii. pl.* 19. f. 3, 4. (1773); *Fabr. Ent. Syst. iii. pt. 1. p.* 244. (ex parte) nec *Melicerta* *Godart.*
Papilio Blandina *Cramer, Ins. 28. t.* 827. f. E. F.; *Hübner, Verz. bek. Schmett. p.* 44. n. 389. (*Acca Bland.*)
Nymphalis Melinoe, *Godart, Enc. M. ix. 432. n.* 261.
Sierra Leone. B.M.
11. NEPTIS AGATHA.
Papilio Agatha *Cramer, Ins. t.* 327. f. A. B.; *Hübner, Verz. bek. Schm. p.* 44. n. 390. (*Acca Agatha*).
Papilio Melicerta *Fab. Ent. Syst. iii. pt. 1. p.* 244. n. 762. (ex parte); *Godart, Enc. M. ix. p.* 432. n. 266. (*Nymphalis* M. but not *P. Melicerta* *Drury*).
Sierra Leone. B.M.
12. NEPTIS KIKIDELI.
Limenitis Kikideli *Boisduval, Faune Ent. de Madag. p.* 50.
St. Marie, Tamatave.
13. NEPTIS METELLA.
Limenitis Metella *E. Doubleday MS.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl.* 35. f. 2.
Sierra Leone. B.M.
14. NEPTIS OPHIONE.
Papilio Ophione *Cramer, Ins. t.* 114. f. E. F.; *Fabricius, Ent. Syst. iii. 1. p.* 131. n. 402.; *Godart, Enc. M. ix. p.* 432. n. 262. (*Nymphalis* Oph.); *Hübner, Verz. bek. Schm. p.* 44. n. 398. (*Acca* Oph.); *E. Doubleday, List Lep. B. M. p.* 95. (*Limenitis* Oph.)
Papilio Aceris *Jones, Icon. iv. t.* 31. f. 1.
Sierra Leone, Ashanti. B.M.
15. NEPTIS VALENTINA.
Papilio Valentina *Cramer, Ins. t.* 327. f. C. D.; *Hübner, Verz. bek. Sch. p.* 44. n. 399. (*Acca* Val.)
Nymphalis Ophione var. *Godart, Enc. M. ix. p.* 432. n. 262.
Variety of *N. Ophione*?
Guinea.
16. NEPTIS PRASLINI.
Limenitis Praslini *Boisd. Voy. de l'Astrol. Ent. p.* 131.
New Ireland, Port Praslin.
17. NEPTIS CONSIMILIS.
Limenitis consimilis *Boisd. Voy. de l'Astrol. Ent. p.* 133.
New Ireland, New Holland.

Genus LIII. ATHYMA Westw.

LIMENITIS p. *Boisd. Doubleday.*
NEPTIS p. *Blanchard.*
ACCA p. *Hübner.*
BIBLIS p. *Horsfield.*
NYMPHALIS p. *Godt.*

BODY robust; wings large and strong, generally with transverse white marks on a black ground.
HEAD moderate, with a few long hairs in front.

Eyes rather prominent, generally naked, but finely hirsute in some species.

Antennæ not more than half the length of the fore wings, straight; terminated by a long and gradually formed slender club, slightly obliquely truncate at the tip, and with a fine keel-like line down the under side.

Labial Palpi rather slender, obliquely directed upwards, but not reaching above the middle of the eye; the tips horizontally porrected and slightly incurved, clothed with closely adpressed scaly hairs, with longer hairs at the base beneath, and towards the extremity of the second joint on the upper side; the terminal joint very short and obtuse.

THORAX robust; collar often variously coloured; dorsum often marked with white spots. Metathorax large, deeply grooved down the middle, finely hairy.

Fore Wings large, subtriangular. Anterior margin rounded; apical angle rounded. Outer margin three fifths of the length of the anterior, slightly convex, straight, or but very slightly concave, and slightly scalloped. Inner margin nearly straight, three fourths of the length of the anterior margin. Costal vein strong, reaching to the middle of the costa. Subcostal vein with its first branch arising at about one fourth of the length of the wing, followed immediately by the second branch; third branch arising at about two thirds of the length of the wing, extending to the apex; fourth branch arising at about five sixths of the length of the wing, and

extending below the apex; the terminal portion of the vein rather deflexed. Upper disco-cellular vein almost obliterated, arising from the subcostal at one third of the length of the wing; middle disco-cellular very short, curved, forming the base of the lower discoidal vein; lower disco-cellular obsolete in the typical species, the discoidal cell being open. In others it is, however, distinct, although very slender, arising from the extremity of the middle disco-cellular, which is in such species curved obliquely towards the base of the wing, and joining the median vein close to the origin of the third branch. In other species, e.g. *L. Vikasi*, the middle disco-cellular (owing to the greater length of the basal portion of the median vein) is obliquely directed towards the anal angle of the fore wing, and the outer disco-cellular is emitted much nearer to the middle of the wing, but is nevertheless united to the median vein close to the origin of the third branch.

Hind Wings subtriangular. Costal margin rather rounded. Outer margin rounded, and more strongly scalloped. Precostal vein strongly curved outwards. Costal vein arched, and extending to the outer angle. Subcostal vein branching very near to its base, and also emitting the upper disco-cellular very near to the base of its branch. Upper disco-cellular forming the base of the discoidal vein. Lower disco-cellular obsolete.

Fore Legs of the male small, pectoral, finely hairy. Tibia not so long as the femur. Tarsus rather more than two thirds of the length of the tibia; when denuded it is cylindrical, simple, exarticulate, and destitute of claws or spines, as is also the tip of the tibia. *Fore Legs* of the female rather longer and thicker, scaly. Tarsus with well developed joints; the first being half the length of the tarsus, without spines at the tip beneath; second, third, and fourth joints with strong short spines on the under side.

Four Hind Legs moderately long. Tibia spined beneath; tibial spurs strong. Tarsi more thickly spined beneath; the spines arranged in rows. Claws and their appendages of the same form as in the allied genera.

ABDOMEN moderately robust, often party-coloured, especially at the base.

LARVA long, cylindrical, with setose warts at the sides. Head spinose; each of the second and third segments with two long, erect, sharp, setose spines; remaining joints with similar spines, but those of the fourth, sixth, eighth, and tenth joints are shorter than the intermediate ones.

PUPA suspended by the tail. Head furcate. Body with a conical protuberance on the dorsal portion of the thorax, and another at the base of the abdomen.

The insects of which I propose to form the present genus seem sufficiently distinct both from *Neptis* and *Limenitis* to warrant its adoption. From the former they are distinguished by their larger size, more robust structure, larger and shorter wings, more squamose and obtuse palpi, and especially by the costal vein of the hind wings extending to their outer angle, and the longer tarsi of the fore legs. From *Limenitis* they are structurally distinguished with much less facility; the form of the fore wings, however, and the style of their markings, the open discoidal cell in the typical species, and especially the form of the larva, armed along the whole length of its body with erect setose spines (judging from Dr. Horsfield's figures of the transformations of *Leucothoe*), together with the exarticulated condition of the anterior tarsi of the males, appear to be their chief points of distinction. Dr. Horsfield, who has generically separated *Leucothoe* from *Neptis* as well as from *Limenitis*, has taken up the Fabrician name of *Biblis* for this group. If, however, the Fabrician generic name is to be retained, it ought strictly to be given to the Fabrician typical species, *P. Biblis* (*Biblis Thadana Boisduval*), which consideration has induced me to propose a new name for this group, in allusion to the melancholy style of colouring. Dr. Horsfield, in addition to *Leucothoe*, has given *Procris*, as belonging to the same genus; but that species has so entirely the habit of *Camilla* and *Sibilla*, that I cannot consider it advisable to separate them, especially as it is evident that Dr. Horsfield's views of the position of the two latter species were influenced by the very incorrect figure which he has copied of the larva and pupa of *Sibilla*.

The variations in the structure of the eyes and the disco-cellular veins of the fore wings in the species of this genus, as mentioned in the generic description, together with those afforded by the palpi and the markings of the body, will furnish better points of distinction than have hitherto been employed to determine the various species, a task hitherto of great difficulty. In addition to these, it may be mentioned, that the sexes of *Athyma Nefte* and *A. Inara* differ considerably in their colouring; the females being black, with rich orange markings, whilst the male of *Nefte* has white markings, and that of *Inara* (figured in our Plate XXXIV. fig. 3.) has the anterior and middle row of markings white, with a purplish tinge. *A. Vikasi* (which Dr. Horsfield unites with *Neptis*) is dark brown, with the markings of the ordinary type, but suffused with dusky brown. I have not seen *A. Venilia*, which may be the male of a species allied to *Inara*, with the middle pale bar of the wings suffused at the edges with blue scales; but it is represented by Cramer as having very much rounded wings.

There are a considerable number of new species in our collections, especially from Northern India, Sylhet, Mussooree, &c. The British Museum is rich in these; but, as they are undescribed, I have not thought it necessary to swell the list with MS. names, or indications of species without names, which it would be difficult to identify. For the like reason, I have omitted several quite distinct in my own collection from Assam, which I owe to the liberality of Major F. Jenkins.

ATHYMA.

1. ATHYMA LEUCOTHOE.

Papilio Leucothoe Linn. *Mus. Lud. Utr.* 292., *Syst. Nat.* ed. 12. vol. ii. p. 780. n. 179.; *Fab. Ent. Syst.* iii. pt. 1. p. 129. n. 395.; *Sulzer, Hist. Ins.* t. 18. f. 2, 3.; *Godart, Enc. M.* ix. p. 430. n. 256. (*Nymphalis L.* but not *Leucothoe* of Cramer).
Var. β . *Papilio Hylas* * Linn. *Syst. Nat.* ed. 10. ii. p. 486.
Papilio Erosine Cramer, *Ins.* t. 203. f. E. F.

Najas hilaris Erosine Hübner, *Samml. exot. Schm.* Band i. pl. —.
Papilio Polyxena Donovan, *Ins. China*, pl. 35. f. 3. (1st ed.)
Limenitis Leucothoe Westwood in *Donovan, Ins. China*, 2nd edit.
Acca Leucothoe Hübner, *Verz. bek. Schmett.* p. 44. n. 397.
India, China, Java. B.M.

* There is a strange confusion in the works of Linnæus and Clerck as to *Papilio Hylas*, Clerck having figured our *Cyrestes Hylas* under that name, with a reference to the Linnæan n. 173., which figure Linnæus subsequently quoted as a variety of his *P. Leucothoe*.

2. *ATHYMA EURYNOME*.
Limnitis Eurynome Westw. in *Donovan, Ins. of China*,
 2nd edit. p. 66. t. 35. f. 4.
Papilio Leucothoe Donovan. Op. cit. 1st edit. (but not of
 Linnaeus).
 China. B. M.
3. *ATHYMA HELICOPIS*.
Nymphalis Helicopsis Godart, Enc. M. ix. p. 431. n. 258.
Papilio Heliodora Cramer, Ins. pl. 212. f. E. F. (not of
 Fabricius, &c.)
Acca Heliodora Hübner, Verz. bek. Schm. p. 44. n. 396.
 Amboyna.
4. *ATHYMA STROPHIA*.
Nymphalis Strophia Godart, Enc. M. ix. p. 431. n. 257.
Papilio Sulpitia Cramer, Ins. pl. 214. f. E. F.; *Hübner*,
Verz. bek. Schm. p. 44. n. 400. (*Acca Sulp.* but not of
 Fabricius).
 China, India.
5. *ATHYMA OPALINA*.
Limnitis opalina Kollar in Hugel's Reise durch Kaschmir,
 &c. p. 427.
 Mussooree (Himalaya).
6. *ATHYMA SANKARA*.
Limnitis Sankara Kollar in Hugel's Reise durch Kaschmir,
 &c. p. 428.
 Himalaya.
7. *ATHYMA LARYMNA*.
Limnitis Larymna E. Doubleday MS.; Doubl. Westw. &
Hewitson, Gen. Diurn. Lep. pl. 35. f. 1.
 Northern India. B. M.
8. *ATHYMA VENILIA*.
Limnitis Venilia.
Papilio Venilia Linn. Syst. Nat. ed. 10. n. 120. ed. 12.;
Clerck, Icon. t. 32. n. 120.; *Fabricius, Ent. Syst.* iii. i.
 134. n. 411.; *Cramer, Ins.* pl. 219. f. B. C.; *Godart*,
Enc. M. ix. p. 433. n. 263. (*Nymphalis V.*)
 Java, India.
9. *ATHYMA SACLAVA*.
Limnitis Saclava Boisduval, Faune Ent. de Madag. p. 49.
 Tamatave.
10. *ATHYMA VIKASI*.
Limnitis Vikasi Horsfield, Lep. Ins. of Java, t. 5. f. 2.
Limnitis Nefte Boisduval, Sp. Gen. Lep. pl. 8. (4 B.) f. 6.
 Java, India, Singapore. B. M.
11. *ATHYMA NEFTE*.
Papilio Nefte Cramer, Ins. pl. 256. f. E. F. ♀; *Hübner*,
Verz. bek. Schm. p. 44. n. 386. (*Pantoporia Nefte*).
Nymphalis Nefte Godart, Enc. M. ix. p. 429. n. 251.
 Java, India. B. M.
12. *ATHYMA INARA*.
Limnitis Inara E. Doubleday MS.; Doubl. Westw. &
Hewitson, Gen. Diurn. Lep. pl. 34. f. 3.
 Northern India. B. M.
13. *ATHYMA MELALEUCA*.
Limnitis melaleuca Boisd. Voy. de l'Astrol. Ent. p. 131.
 Amboyna, Rawak.
14. *ATHYMA BREBISONII*.
Limnitis Brebissonii Boisd. Voy. de l'Astrol. Ent. p. 132.
 New Guinea.

Genus LIV. LIMENITIS.

LIMENITIS *Fabricius, Syst. Gloss.*ACCA and LIMENITIS *Hübner*.NYMPHALIS *Boisd. Ind. Meth., E. Doubleday, List Lep. B. M.*LIMENITIS p. *Boisd. Ind. Meth.*

BODY moderate; abdomen rather short; wings long, trigonate.

HEAD rather small, with a small tuft of hair at the base of each antenna, and a small, conical, frontal tuft.

Eyes but slightly prominent, naked.*Labial Palpi* rather short, thick, directed obliquely upwards, reaching rather above the middle of the eyes; the tips convergent, thickly clothed with short hairs, especially upon the under side of the basal joint, and the upper side of the terminal half of the second joint; the third joint short, oval, obtuse at the tip.*Antennæ* scarcely half the length of the costal margin of the fore wings, straight; terminated by a very slender, gradually formed club, which is nearly one third of the length of the whole antenna, rather obliquely truncate at the tip, with a very shallow double groove on the under side. Spiral tongue long and strong.

THORAX oval, hairy; tippets and sides of the metathorax more hirsute.

Fore Wings elongate-trigonal. Fore margin very little arched; apical angle rounded. Apical margin rather more than two thirds of the length of the anterior, emarginate, and very slightly scalloped. Inner margin a very little longer than the apical one, nearly straight. Costal vein strong, extending to three fifths of the length of the costa. Subcostal vein with the first and second branches arising close together before the extremity of the discoidal cell; third branch arising just beyond the place of junction of the costal vein with the costa, and extending to the tip of the wing; fourth branch arising at about four fifths of the length of the wing, reaching the apical margin a little below the apex. The terminal portion of the subcostal vein very slightly deflexed. Upper disco-cellular arising at four ninths of the length of the wing, extremely short; middle disco-cellular vein short, curved outwards; lower disco-cellular slender, nearly straight, uniting with the third branch of the median vein just beyond its origin, closing the discoidal cell, which is rather narrow, and reaches nearly to half the length of the wing. Median vein strong; its branches wide apart; the third gradually arched.*Hind Wings* subtriangular. The costal margin not much curved. The outer margin of the same length as the costal, somewhat truncate from the extremity of the subcostal vein to that of the first branch of the median, scalloped. The precostal vein well defined and curved outwardly. Costal vein arched, extending to the outer angle of the wing. Subcostal vein arising just before the precostal; its branches arising at the same distance

from its base as exists between the base of the wing and that of the precostal vein. Upper disco-cellular vein forming the base of the discoidal one, and arising at a similar distance from the base of the subcostal branch; lower disco-cellular wanting, so that the cell is open. Median vein and its branches moderately robust.

Fore Legs of the male small, pectoral, clothed with rather short loose hairs. Femur slightly thickened at the base. Tibia nearly straight, as long as the femur, slightly thickened at the tip. Tarsus two thirds of the length of the tibia, gradually attenuated, and, when denuded of scales and hairs, consisting of three distinct joints; the basal joint more than half the length of the tarsus; the second and third of nearly equal length.

Fore Legs of the female longer than in the male, more scaly, and much less hairy. The femur and tibia of nearly equal length. The tarsus two thirds of the length of the tibia, and of equal thickness with it to the tip; composed of five joints; the basal joint occupying half the length of the tarsus; the second, third, and fourth gradually shortening; each with a pair of short spines at the tip, on the lower side; the terminal joint very small, with two very short straight spines.

Four Hind Legs moderately long and robust, scaly. Femur hairy beneath. Tibia of equal length with the femur, with strong spines beneath (except at the basal one third) and at the tip; tibial spurs strong. Tarsus equal to the tibia in length and thickness, with four rows of spines beneath. Claws rather large, but not so long as the terminal setæ of the tarsus, strongly curved, and very acute. Paronychia bifid, setose, nearly as long as the claws. Pulvillus short.

ABDOMEN rather small.

LARVA subcylindrical, narrowed behind, with setose tubercles on the sides of the body, and with several pairs of elongated, obtuse, hairy spines on the back; those towards the head being the longest.

PUPA suspended by the tail. Head-case beaked or bifid; gibbose on the back of the thorax.

Regarding, with Fabricius, *Papilio Populi* as the type of this genus, it will consist of a series of species generally of larger size, and much more varied in their colours, and consequently handsomer than those of the two preceding groups. The propriety of this step has been recognised; Boisduval and E. Doubleday (*List Lep. B. M.*) having given *Populi* and its American allies as a genus distinct from *Limenitis*, under the name of *Nymphalis* (a name which must be restored to the *Charaxes*, as has been judiciously done by E. Doubleday in the plates already published of this work). Boisduval and Doubleday, however, remove *Camilla* and *Sibilla* to their magazine genus *Limenitis*; a step which I cannot approve, considering the genus in the same light as M. E. Blanchard, in the *Histoire des Animaux articulés*. It is proper to observe, however, that the discoidal cell is not open, as he states, in the species which he gives as belonging to the genus, namely, *Sibilla*, *Camilla*, *Populi*, and *Arthemis*; nor are the fore legs alike in both sexes, nor terminated by a single claw, as stated by Mr. Curtis.* From the preceding genus the species are distinguished by their longer fore wings, generally concave along the apical margin; the short discoidal cell of the fore wings, the generally oblique position of the pale markings or bars running across the wings, the more hairy palpi, the articulation of the fore tarsi of the males, and the form of the larvæ, also appear to be characteristic.

The Caterpillar of *L. Populi*, as figured by Hübner (copied by Boisduval, *Sp. Gen. Lep.*, pl. III. fig. 8.), is green, varied with brown; the head with two points; the second segment of the body with two thick, erect, somewhat divergent, obtuse, fleshy spines; the third, fifth, and seventh segments with setose tubercles on the back; and the terminal segments gradually acuminate; the penultimate with two rather sharp tubercles, directed backwards; the sides of the body also furnished with setose tubercles. It feeds on poplars and willows. The Chrysalis is thick, and with a thick tubercle at the base of the abdomen-case. The head is but slightly elongated. This species is widely spread over the northern half of Europe, although not a native of England.

The Larva of the North American species, *L. Ursula*, is represented by Abbot and Smith as more elongated, with the head somewhat serrated at the sides and top; the second segment of the body with two long, diverging, setose, obtuse horns, and the following segments of the body appear irregularly furnished with dorsal tubercles. The Chrysalis nearly resembles that of *Populi*. The species is remarkable for entirely wanting the white fasciæ so characteristic of the genus, the upper surface of the wings being black, the extremities covered with blue scales, with several subapical rows of black lunules; on the under side it is glossed with purple, and elegantly ornamented with bright orange spots at the base and beyond the middle of the wings. It bears, in fact, a singularly strong analogy in its colours to the North American *Papilio Philenor*, whilst the allied species, *Limenitis Disippus* (*P. Archippus Cramer*), bears an equally strong analogy to *Danaus Archippus* in its dark orange-red colour, with a black border to all the wings, spotted with white.

The Larva of *Limenitis Sibilla* feeds upon different species of honeysuckle (*Lonicera*), and, as figured by Hübner and copied by Curtis, has the head subbifid; and the second, third, fifth, tenth, and eleventh segments of the body respectively furnished with a pair of obtuse, fleshy, setose spines, all of nearly equal length; the other segments, as well as the sides of the body, bearing small setose tubercles. The Chrysalis has the head-case deeply bifid, the back of the thorax gibbose, and the base of the dorsal surface of the abdomen furnished with a large obtuse prominence.

The transformations of *Limenitis Procris*, an Eastern species closely allied to *L. Camilla*, are figured in Dr. Horsfield's work on the Lepidoptera of Java. The head-case of the Chrysalis is deeply bifid, each of the horns being dilated into a broad truncate lobe, acute at the tips; the wing-cases are singularly dilated towards the dorsal surface, with a short tooth at the base of each, and the segments of the abdomen are very irregular. The Larva has the body very rugose; each segment with thick, obtuse, erect tubercles; those of the second and third segments very much elongated, and the head is also spined at the sides.

The species are natives of Europe, Asia, the Indian Islands, and North America. Several of the finest species, hitherto undescribed,

* Linnæus rightly detected the difference of structure in the fore legs of the sexes of these insects. In his description of *L. Sibilla* (*L. Camilla Mus. Reg. Utr.* p. 302.), he says, "Pedes antici mutici," whilst he describes the other sex (p. 302. *P. Prorsa*) as having six perfect legs. This, coupled with other characters given in his detailed description, especially the double rows of black dots beyond the white fascia of the hind wings on the under side, is sufficient to prove that in this work he was describing the two sexes of the species hitherto known in England under the name of *L. Camilla*, having no knowledge of the southern European species to which Fabricius inappropriately applied the name of *Camilla*.

have been received within the last few years from Assam, Sylhet, and Northern India; most of these are figured in our Plates. Quite recently, Mr. Fortune has brought another large new species from China. The species which E. Doubleday has named *L. Eulalia*, a native of Venezuela, appears to me to be more properly referable to the genus *Heterochroa*.

LIMENITIS.

1. LIMENITIS POPULI.

Papilio Populi *Linnaeus, Faun. Suec.* p. 277. n. 1055., *Syst. Nat.* ii. p. 776. n. 162.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 111. n. 343.; *Rösel, Belust. Ins.* p. 3. t. 33. f. 1, 2. t. 31. f. 1. 5. larva and pupa; *Esper, Pap.* pt. 1. t. 12. f. 1., *ejusd.* t. 31. Supp. 7. f. 1.; *Panzer, Faun. Ins. Germ.* fasc. 28. n. 22.; *Hübner, Exot. Schm.* t. 23. f. 108, 109, 110.; *Ochsenheimer, Schmett. von Europa*, Band i. p. 145.; *Godart, Lépidopt. de France*, i. t. 6. f. 1., *Enc. M.* ix. p. 401. n. 175.; *Boisduval, Sp. Gen. Lep.* pl. 3. f. 8. and pl. 8. f. 5., *Index Meth.* n. 123. (*Nymphalis* P.)

Germany, France, and North Europe.

B. M.

2. LIMENITIS URSULA.

Papilio Ursula *Fabricius, Ent. Syst.* iii. pt. 1. p. 82. n. 257.; *Abbott & Smith, Ins. of Georgia*, i. t. 19. n. 10.; *Godart, Enc. M.* ix. p. 380. n. 101.; *Boisduval et Leconte, Icon. Lép. et Chen. de l'Amér. Sept.* t. 53. *Pap. Astyanax* *Fabricius, Mantissa Ins.* ii. p. 4. n. 29. *Pap. Ephestion* *Stoll*, t. 25. f. 1. 1a.; *Godart, Enc. M.* ix. p. 42. n. 51.

Georgia, South Carolina.

B. M.

3. LIMENITIS DISIPPUS.

Nymphalis Disippe *Godart, Enc. M.* ix. p. 393. n. 152.; *Boisduval et Leconte, Icon. Lép. et Chen. de l'Am. Sept.* t. 55.

Papilio Misippus *Fabricius, Ent. Syst.* iii. pt. 1. p. 50. n. 153. (but not of *Linnaeus*.)

Papilio Archippus *Cramer*, t. 16. f. A. B.

United States of North America, Guiana.

B. M.

4. LIMENITIS ARTEMIS.

Papilio (*Nymph. Phal.*) *Arthemis* *Drury, Ill. exot. Ent.* ii. pl. 10. f. 3, 4. and Appendix vol. ii.; *Say, American Entomology*, ii. pl. 23.; *Boisduval et Leconte, Icon. Lép. et Chen. de l'Amér. Sept.* t. 54.

Papilio Lamina *Fabricius, Ent. Syst.* iii. pt. 1. p. 118. n. 361.; *Jones, Icon.* vol. v. t. 32. f. 1.; *Godart, Enc. M.* ix. p. 380. (*Nymphalis* L.)

North America, Nova Scotia, Hudson's Bay, Upper Canada, Rocky Mountains, New York, &c.

B. M.

5. LIMENITIS SIBILLA.

♂ *Papilio Sibilla* *Linn. Syst. Nat.* ii. 781. n. 186.; *Rösel, Ins. Belust.* iii. t. 33. f. 3. and t. 70. f. 1—3.; *Fabricius, Ent. Syst.* iii. i. 246. n. 736.; *Esper, Europ. Schmett.* t. 14. f. 2. 3.; *Hübner, Europ. Schmett. Pap.* f. 103—105.; *Ochsenheimer, Schm. Europ.* iv. p. 17.; *Boisduval, Ind. Meth.* n. 121.; *Godart, Enc. M.* ix. p. 402. n. 176.

Pap. Prorsa *Linnaeus, Mus. Reg.* p. 303. n. 121.

♀ *Papilio Camilla* *Linnaeus, Syst. Nat.* ii. 781. n. 187.

Papilio Camilla *Haworth, Lep. Brit.* p. 29.; *Lewin, Pap.* pl. 8.; *Donovan, Ins.* pl. 244.; *Harris, Aurelian*, pl. 30. f. m. n.; *Curtis, Brit. Ent.* pl. 124.; *Duncan, Brit. Butt.* pl. 20. f. 2.; *Stephens's Ill. Brit. Ent. Haust.* vol. i. p. 52.; *Westw. & Humphreys, Brit. Butt.* p. 60. pl. 16. f. 6—9.

England, France, Germany, Russia, and North of Europe.

B. M.

6. LIMENITIS CAMILLA.

Papilio Camilla *Fabricius, Ent. Syst.* iii. pt. 1. p. 246. n. 767. (but not of *Linnaeus*, nor of the various English authors quoted under the preceding species); *Hübner, Europ. Schm. Pap.* f. 166, 107.; *Ochsenheimer, Schm. Europ.* iv. 18. (*Limenitis* *Camilla*); *Boisduval, Ind. Meth.* n. 122.; *Godart, Enc. M.* ix. p. 402. n. 176.

Papilio Sibilla *Drury, Ins.* ii. t. 16. f. 1, 2.; *Cramer*, t. 144. f. C. D. (but not of *Linnaeus*.)

Central and Southern Europe.

B. M.

7. LIMENITIS PROCRIS.

Papilio Procris *Fabricius, Ent. Syst.* iii. pt. 1. p. 138. n. 425.; *Cramer, Pap.* t. 106. f. E. F.; *Godart, Enc. M.* ix. p. 404. n. 178.

India, Java.

B. M.

8. LIMENITIS SELENOPHORA Kollar in Hugel's Reise durch Kaschmir,

p. 426. pl. 7. f. 1, 2.

Mussooree (Himalaya).

9. LIMENITIS ZULEMA E. Doubleday MS.; Doubl. Westw. & Hewitson,

Gen. Diurn. Lep. pl. 34. f. 1.

India.

10. LIMENITIS ISMENE E. Doubleday MS.; Doubl. Westw. & Hewitson,

Gen. Diurn. Lep. pl. 34. f. 2.

Assam, Sylhet.

B. M.

11. LIMENITIS DARAXA E. Doubleday MS.; Doubl. Westw. & Hewitson,

Gen. Diurn. Lep. pl. 34. f. 4.

Assam, Sylhet.

B. M.

12. LIMENITIS ZAYLA E. Doubleday MS.; Doubl. Westw. & Hewitson,

Gen. Diurn. Lep. pl. 35. f. 4.

Assam, Sylhet.

13. LIMENITIS DUDU Westw. Nov. Sp.*

Silhet.

B. M.

14. LIMENITIS ALANKARA.

Aconthea Alankara *Horsfield, Lep. Java*, pl. 5. f. 6.

Java.

Genus LV. HETEROCHROA.

HETEROCHROA *Boisd.*

NYMPHALIS, Sect. K., *Godt.*

ADELPHA *Hübner*.

BODY rather robust; wings generally black or brown, with an oblique white common bar, and with orange patches towards the tip of the fore wings, and at the anal angle of the hind ones.

HEAD rather broad in the males; those of the females narrower, with a very slight frontal tuft, and with a bundle of hairs at the base of each antenna.

* *Limenitis* alis supra fuscis, fascia recta subangusta obliqua submedia communi alba, versus costam anticarum parum irregulari, maculis duabus angustis obscure rufis nigro-marginatis versus basin anticarum: posticis serie lata lunularum pone fasciam strigaeque subapicali nigris, angulo anali acuto aurantio, nigro maculato: alis subtus margaritaceis fascia maculisque basalibus ut in pagina superiori, apicalibus vero oblitteratis, angulo anali late rufescente. Exp. alar. ant. unc. 3½.

Eyes prominent, setose in front, or naked.

Labial Palpi short, directed upwards rather obliquely, but not reaching above the middle of the eyes, extended but little in front of the head, scaly, with the base hairy beneath, and with an elongated tuft of hair on the upper side of the inner half of the second joint; the tips rather converging. Apical joint very minute, and ovate-conic.

Antennæ considerably longer than half the fore wings, nearly straight; with an elongated, very slender club.

THORAX robust, especially in the males; neck transverse, as wide as the head, clothed with erect hairs. Metathorax hairy at the sides.

Fore Wings elongate, trigonate. Anterior margin arched; apical angle rounded. Apical margin two thirds of the length of the anterior, more or less emarginate. Inner margin nearly as long as the apical one, nearly straight. Costal vein moderately strong, extending to the middle of the costa. Subcostal with its first and second branches arising near together before the extremity of the discoidal cell; third branch arising at about two thirds of the length of the wing, extending to the apical angle; fourth branch arising at about five sixths of the length of the wing. Upper disco-cellular vein almost obliterated, branching from the subcostal at the length of two fifths of the wing from the base; middle disco-cellular very short, rather curved, directed obliquely towards the base of the wing; the lower disco-cellular very slender, but distinct, arched obliquely, and extending to the median vein either at or a little before the origin of the third branch, closing the discoidal cell, the anterior part of which is rather the longest; third branch of the median vein considerably arched.

Hind Wings elongate, trigonate; the base of the costal margin much arched, but with the greater portion of its length nearly straight. Outer margin (from the extremity of the costal vein to that of the first branch of the median vein) rather longer than the costal margin, nearly obliquely truncate, but strongly scalloped. Inner, or anal, margin grooved, and nearly one fourth longer than the costal one. Precostal vein very much curved outwardly. Costal vein much arched to about the middle, and then straight. Subcostal vein branching at about one fourth of the length of the wing. Upper disco-cellular curved, forming the base of the discoidal vein, arising at a very little distance beyond the branch of the subcostal; lower disco-cellular vein obsolete, so that the discoidal cell is open.

Fore Legs of the male very small and pectoral, with fine silken hairs. Femur rather longer than the tibia. Tarsus half the length of the tibia, exarticulated and simple. *Fore Legs* of the female rather longer and much more scaly than those of the male. Femur rather hairy beneath. Tibia nearly as long as the femur, slightly curved. Tarsus half the length of the tibia, well articulated when denuded of scales, five-jointed; the basal joint occupying half the tarsus; second, third, and fourth joints subquadrate, with sharp short spines at the extremity beneath; fifth joint with several short curved spines, and two longer setæ.

Four Hind Legs strong; the second pair in the males more elongate than the hind ones, having the femur longer than the tibia; which latter has two rows of spines beneath, and two long apical spurs. Tarsus with several rows of short spines. Ungues, pulvillus, and paronychiae formed as in many of the preceding genera.

ABDOMEN rather small and slender.

TRANSFORMATIONS unknown.

This is a genus of very handsome moderate-sized butterflies, closely allied to *Limenitis* in most of their structural details, but which are more readily distinguished by the general appearance and colouring of their wings (which has doubtless led to the proposal of the generic name applied above), as well as by their geographical distribution, being natives of Brazil and the tropical parts of America, where they seem to represent such true *Limenites* of the East as are represented in the three lower figures of Plate XXXIV. They vary considerably in the form of the fore wings, which are much more emarginate in some species than in others, as well as in the depth of the scallops of the hind wings, which almost form tails in *H. Gelania Godart* (represented in our Plate XXXVI. under the name of *H. Arecosa*).

There is a very close affinity between many of the species introduced into the following list; but as they appear constant in their markings, especially in those of the characteristic portion of the fore wings beneath, namely the discoidal cell, they will probably be regarded as distinct species, rather than as geographical or representative subspecies. The great variety and beauty of design which they exhibit, whilst their colours are so few and simple, are very striking characteristics of the group.

Some of these species, such as *Marse*, *Isis*, *Irmia*, and *Mesenteria*, differ in entirely wanting the white band across the wings, and in having only a very large patch of crimson or orange on the fore wings, running, in the two first-named species, from the middle of the fore margin to the anal angle. Other species, such as *H. Nea*, *Melona*, *Erotia*, *Isis*, and *Lerna*, are much more robust than the rest. *H. Fessonia* and *Cestus*, in addition to the unbroken white fascia, have the discoidal cell shorter than usual.

The under surface of the wings is much more varied than the upper, the ground colour being paler, and the various dark markings, obscurely seen on the upper side, being much more distinct on the lower. Most of the species are, moreover, distinguished by an orange patch at the anal angle of the hind wings, enclosing two black spots. A considerable number of species have been described by Mr. Hewitson in the *Annals of Natural History*, vol. xx.

Some of the species certainly approach near to *Apatura*, and it will be very interesting to ascertain the structure of their Larvæ, which may probably prove intermediate between those of *Limenitis* and that genus.

HETEROCHROA.

1. HETEROCHROA IPHICLA.

Papilio Iphicla *Linnaeus*, *Syst. Nat.* ii. 784. n. 181.;
Clerck, *Icon.* t. 41. f. 3.; *Jones*, *Icon.* t. 74. f. 2.;

Fabricius, *Ent. Syst.* iii. pt. 1. p. 135. n. 417.; *Drury*,
Ill. vol. i. t. 14. f. 3, 4.

- Nymphalis Iphicla *Godart, Enc. M.* ix. p. 374. n. 80.;
Lucas, Hist. Nat. Lep. exot. pl. 68. f. 1.
 Papilio Cytherea *Cramer, Pap.* pl. 376. f. C. D. (but not
 of Linnaeus.)
 Adelpha Cytherea *Hübner, Verz. bek. Schm.* p. 42. n. 375.
 Guiana, Brazil. B. M.
2. HETEROCHROA THOASA *Hewitson MS.*
 Para. B. M.
3. HETEROCHROA BASILEA.
 Papilio Basilea *Cramer, Pap.* pl. 188. f. D.
 Adelpha Basilea *Hübner, Verz. bek. Schm.* p. 42. n. 370.
 Surinam.
4. HETEROCHROA SYMA.
 Nymphalis Syma *Godart, Enc. M.* ix. p. 374. n. 82.
 Adelpha Syma *Hübner, Zutrage, pt. iii.* p. 37. f. 571, 572.
 Brazil. B. M.
5. HETEROCHROA ZEBIA *Hewitson MS.*
 Rio Janeiro. B. M.
6. HETEROCHROA MARSE.
 Doxocopa Marse *Hübner, Zutrage, pt. iv.* p. 10. f. 617,
 618.
 Brazil, Rio Janeiro. B. M.
7. HETEROCHROA ELEA.
 Papilio Elea *Jones, Icon.* iv. t. 6. f. 2.; *Fabricius, Ent.*
Syst. iii. pt. 1. p. 141. n. 434.?
 Brazil? B. M.
8. HETEROCHROA PLESAURE.
 Adelpha Plesaura *Hübner, Zutrage, pt. ii.* p. 11. f. 231,
 232.; *Verz. bek. Schm.* p. 42. n. 372.
 Brazil, West Coast of South America. B. M.
9. HETEROCHROA SERPA *E. Doubleday, List Lep. Brit. Mus.* p. 107.
 H. Serpa *Boisduval, Sp. Gen. Lep.* i. t. 8. f. 4.?
 P. Iphiclus *Cram.* t. 188. f. E. F.
 Adelpha Iphicla *Hübner, Verz. bek. Schm.* p. 42. n. 371.
 Brazil.
10. HETEROCHROA ZEA *Hewitson MS.*
 Rio Janeiro.
11. HETEROCHROA HYAS *Boisduval in Cuv. Règne An.* ed. Crochard, *Ins.*
 pl. 138. f. 1. 1. bis.
 ———?
12. HETEROCHROA BREDOWII.
 Adelpha Bredowii *Hübner, Zutrage, pt. v.* p. 10. f. 825,
 826.
 Limenitis Eulalia *E. Doubleday MS.; Doubl. Westw. &*
Hewitson, Gen. Diurn. Lep. pl. 36. f. 1.
 Mexico.
13. HETEROCHROA NEA.
 H. Nea *Hewitson, Annals of Nat. Hist.* xx. p. 257. pl.
 20. f. 1.
 Para. B. M.
14. HETEROCHROA MELONA.
 H. Melona *Hewitson, Ann. Nat. Hist.* xx. p. 258. pl. 20.
 f. 2.
 Colombia. B. M.
15. HETEROCHROA ERODIA.
 H. Erotia *Hewitson, Ann. Nat. Hist.* xx. p. 259. pl. 20.
 f. 3.
 Bolivia. B. M.
16. HETEROCHROA LERNA.
 H. Lerna *Hewitson, Ann. Nat. Hist.* xx. p. 259. pl. 20.
 f. 4.
 H. Erotia var? *Hewitson, &c.*
 Bolivia. B. M.
17. HETEROCHROA DIONYSA.
 H. Dionysa *Hewitson, Ann. Nat. Hist.* xx. p. 260. pl. 20.
 f. 5.
 Mexico. B. M.
18. HETEROCHROA FESSONIA.
 H. Fessonia *Hewitson, Ann. Nat. Hist.* xx. p. 260. pl. 20.
 f. 6.
 Honduras. B. M.
19. HETEROCHROA CORCYRA.
 H. Corcyra *Hewitson, Ann. Nat. Syst.* xx. p. 262. pl. 21.
 f. 9.
 New Grenada. B. M.
20. HETEROCHROA COLLINA.
 H. Collina *Hewitson, Ann. Nat. Hist.* xx. p. 262. pl. 21.
 f. 10.
 Quito. B. M.
21. HETEROCHROA ARICIA.
 H. Aricia *Hewitson, Ann. Nat. Hist.* xx. p. 263. pl. 21.
 f. 11.
 Bolivia. B. M.
22. HETEROCHROA PHLIASSA.
 Nymphalis Phliassa *Godart, Enc. M.* ix. p. 373. n. 78.
 Adelpha Phliase *Hübner, Verz. bek. Schm.* p. 42. n. 376.
 Guiana, Brazil.
23. HETEROCHROA CYTHEREA.
 Papilio Cytherea *Linnaeus, Syst. Nat.* ii. p. 785. n. 210.
 (but not of Cramer); *Clerck, Icon.* t. 39. f. 3.; *Jones,*
Icon. v. t. 93. f. 2, 3.; *Fabricius, Ent. Syst.* iii. pt. 1.
 p. 144. n. 441.; *Godart, Enc. M.* ix. n. 373. n. 79.
 (Nymphalis C.)
 ♀ Var. Papilio Elea *Linnaeus, Cramer, Pap.* t. 242. f. D. E.
 Adelpha Elea *Hübner, Verz. bek. Schm.* p. 42. n. 374.
 Guiana, Brazil, Santa Lucia. B. M.
24. HETEROCHROA MYTHRA.
 Nymphalis Mythra *Godart, Enc. M.* ix. p. 374. n. 81.
 Brazil. B. M.
25. HETEROCHROA LEUCOPHTHALMA.
 Nymphalis Leucophthalma *Latreille in Humboldt, Obs.*
Zool. p. 247. pl. 25. f. 3, 4.; *Griffith, Anim. Kingd. Ins.*
 pl. 79. f. 3.; *Godart, Enc. M.* ix. p. 414. n. 202.
 Peru, Colombia.
26. HETEROCHROA CESTUS *Hewitson, Ann. Nat. Hist.* vol. xx. p. 261. pl.
 21. f. 7.; *Doubl. Westw. & Hewitson, Gen. Diurn. Lep.*
 pl. 36. f. 4.
 Venezuela. B. M.
27. HETEROCHROA ALALA *Hewitson, Ann. Nat. Hist.* vol. xx. p. 261. pl.
 21. f. 8.; *Doubl. Westw. & Hewitson, Gen. Diurn. Lep.*
 pl. 36. f. 3.
 Venezuela. B. M.
28. HETEROCHROA IRMINA *E. Doubleday MS.; Doubl. Westw. & Hewitson,*
Gen. Diurn. Lep. pl. 36. f. 2.
 Venezuela.
29. HETEROCHROA GELANIA.
 Nymphalis Gelania *Godart, Enc. M.* ix. p. 378. n. 93.;
Lucas, Hist. Nat. Lep. exot. pl. 68. f. 3.
 Heterochroa Arcosa *Hewitson, Ann. Nat. Hist.* vol. xx. p.
 263. pl. 21. f. 12.; *Doubl. Westw. & Hewitson, Gen.*
Diurn. Lep. pl. 36. f. 5.
 Tropical America, Mexico, West Indies.
30. HETEROCHROA COCALA.
 Papilio Cocala *Cramer, Pap.* pl. 242. f. F. G.; *Godart,*
Enc. M. ix. p. 372. n. 77. (Nymphalis C.)
 Adelpha Coc *Hübner, Verz. bek. Schm.* p. 42. n. 373.
 Guiana and Brazil.
31. HETEROCHROA MESENTERIA.
 Papilio Mesenteria *Fabricius, Spec. Ins.* ii. p. 105. n. 462.;
Herbst, Ent. Syst. iii. pl. 1. p. 141. n. 435.
 Papilio Mesenteria *Cramer, Pap.* pl. 162. f. B. C.
 Nymphalis Mes. *Godart, Enc. M.* ix. p. 372. n. 76.
 Adelpha Mes. *Hübner, Verz. bek. Schm.* p. 42. n. 369.
 Surinam.
32. HETEROCHROA EPIONE.
 Nymphalis Epione *Godart, Enc. M.* ix. p. 405. n. 179.
 Brazil.
33. HETEROCHROA ISIS.
 Papilio Isis *Drury, Ill.* iii. Appendix, and t. 7. f. 1, 2.;
Fabricius, Ent. Syst. iii. pl. 1. p. 124. n. 377.; *Jones,*
Icon. v. t. 34. f. 2.; *Donovan, Ins. India,* pl. 33. f. 1.;
Godart, Enc. M. ix. p. 421. n. 225.
 Nymphalis Lycorias *Godart, Enc. M.* ix. p. 405. n. 180.
 Brazil. B. M.

Genus LVI. **DIADEMA.**

DIADEMA *Boisd.*

APATURA p. *Fabricius, Horsf.*

HYPOLIMNAS, ESOPTRIA, and PANOPEA, *Hübner*.

NYMPHALIS p. *Godt.*

BODY moderately robust; wings large, those of the males generally more brilliantly coloured than those of the females; head and neck often marked with small white spots.

HEAD moderately large, with a frontal tuft nearly reaching to the tip of the second joint of the palpi.

Eyes prominent, naked.

Labial Palpi porrected, rather more than twice the length of the head, ascending obliquely, but scarcely elevated above the level of the middle of the eyes, rather flattened beneath, scaly; the scales lying flat except at the base, beneath which they are slightly elongated, and also near the middle of the upper side of the second joint, where there is an elongated tuft of white scales, and another near the tip within, which causes the apical joint to be as wide apart as the space between the eyes; the terminal joint is elongate ovate, slightly pointed at the tip, and about one fourth of the length of the second joint.

Antennæ short, scarcely above three fourths of the length of the body, and not half the length of the wings, slender, slightly curved; terminated by a distinct, rather small club, not occupying more than one fifth of the length of the antennæ. Club obovate, terminated by a very minute acute point.

THORAX moderately robust, hairy, especially on the metathorax; neck short, marked with small white spots; wings large.

Fore Wings subtrigonate. Fore margin much arched; apical angle not regularly rounded. Apical margin about three fourths of the length of the anterior, angulated below the apex, emarginate below the angle; margin slightly scalloped. Inner margin slightly concave, about the same length as the apical one. Costal vein extending beyond the middle of the costa. Subcostal vein with its first branch arising about one fourth from the base of the wing; second branch arising at a little distance beyond the first, and before the anterior extremity of the discoidal cell; third branch arising at about two thirds of the length of the wing, and extending to the tip; fourth branch arising half way between it and the apex, and reaching the apical margin at a little distance below the apex; the terminal portion of the vein slightly deflexed. Upper disco-cellular vein very short, almost obsolete, arising from the subcostal at about one third of the length of the wing; middle disco-cellular short, curved obliquely outwards; lower disco-cellular slightly curved, about three times as long as the middle one, and uniting with the third branch of the median vein at a little distance beyond its origin, closing the discoidal cell at a little more than one third of the length of the wing; the third branch is considerably curved beyond the discoidal cell.

Hind Wings broad, nearly rounded. Anterior margin much arched. Outer margin somewhat longer than the anterior, rounded, and scalloped. Precostal vein curved outwardly. Costal vein much curved, extending to the outer angle. Subcostal vein branching at about one fifth of the length of the wing. Upper disco-cellular arising very close to the base of the subcostal branch; lower disco-cellular arising at about the same distance from the base of the upper disco-cellular, curved, and united with the median vein exactly at the origin of its third branch, closing the discoidal cell.

Fore Legs of the male short and pectoral, scaly. Femora clothed beneath with rather long scaly hairs. Tibia and tarsus scaly. Tibia slightly curved. Tarsus not more than one third of the length of the tibia, elongate-ovate, exarticulate. *Fore Legs* of the female considerably larger. The femur and tibia similarly clothed. Tarsus scaly, more than two thirds of the length of the tibia, distinctly articulated; the basal joint occupying nearly three fourths of the whole tarsus, with two strong spurs at its tip beneath; second, third, and fourth joints very short, obliquely truncate, spined beneath at the tip; fifth joint minute, but with similar spines.

Four Hind Legs rather long, scaly. Tibia with two rows of short spines, and rather long tibial spurs. Tarsi with several rows of shorter spines beneath and at the sides. Claws moderate.

LARVA cylindrical; head with two erect spines, each of the following segments with several shorter spines.

PUPA robust; hunched on the back; abdomen-case spined.

The characters above described are those presented by *Papilio Bolina* of Linnaeus and its allies, forming a group of considerable extent, and very widely dispersed over the Old World, as well as numerous in individuals. They are well distinguished by their large broad wings, and by the white spots on the head and thorax. The males, also, in most of these typical species, have all their wings marked on the upper side with large resplendent patches of white, edged with purple, or otherwise glossed with purple.

In the *List of the Diurnal Lepidoptera of the British Museum Collection*, and in the plates of this work, E. Doubleday, however, added to the genus a number of other species of very variable habits, and which, although at first sight apparently scarcely related to the typical species above mentioned, appear to be more nearly allied to them than to any other Nymphalidæ, and which, unless placed in the present genus, would require several distinct genera for their reception.

September 2. 1850.

The African species, *P. Lucretia*, *Semire*, and *Hostilia*, indeed, agree tolerably well in general form and character with the typical species, but the style of their markings, especially on the under side of the wings, which are thickly spotted with black, is very distinct. The admission of these species, however, requires the introduction of *P. Euryta*, *Hirce*, and *Boisduvalii*, which, although possessing much longer wings (resembling, in fact, *Acræa* much more than *Nymphalidæ*), have their under sides very similarly marked, their veins similarly arranged, and their palpi and antennæ also alike.

P. dubia and *Anthedon* differ from all the preceding in having the cell of the hind wings quite open; in other respects, however, they agree in the main with the other generic characters, and have the wings much less elongated than in *Euryta* and *Boisduvalii*, whilst *P. dissimilis*, *Nama*, and *Nyctelius*, although equally well agreeing with the general characters of the group, have the discoidal cell of all the wings open.

With such modifications, therefore, as are indicated above, chiefly, however, affecting the form and marking of the wings, and the open or closed condition of the discoidal cell, I see no sufficient reason for separating as a distinct genus the insect represented in our Plate XXXIX. fig. 3. under the name of *PentHEMA Lisarda*, a species which, in the form of the wings and their peculiar markings, possesses the greatest affinity with *P. dissimilis* and *Nama*, but which differs from them, and agrees with the typical *Diadema*, in the arrangement of its wing veins; its antennæ, however, have the club much more slender, and the terminal joint of the palpi smaller and more acute than in the generality of the species.

In a very beautiful series of original drawings of the transformations of the Lepidoptera of India, communicated to me by Mr. Frith, are contained figures of the Larva and Pupa of *D. Lasinassa* (Auge); the former is a thick cylindrical caterpillar, rather attenuated to the head, which is dark red-brown; the body is blackish brown, with paler freckles; the head is armed with two long, erect, black, setose spines, each segment of the body also bearing several similar, but shorter, red-brown spines. In general form it very much resembles that of *Gynæcia Dirce*, figured by Stoll (pl. II. fig. 3.). The Pupa (like that of *D. Bolina*, figured in General Hardwicke's collection of drawings in the British Museum) is thick and suspended by the tail; the head is obtuse; the back of the thorax-case prominent; the abdomen-case very gibbose, and with a transverse row of spines on each segment.

Some of the species are extremely variable in their markings and colours; this is especially the case with the females of *D. Lasinassa*, as will be seen by our synonymes of that species. The females of *D. Bolina* differ so much from the males, and at the same time bear so great and general a resemblance to some of the species of *Danaïs*, that they were even included by Godart in that genus. It will be seen from the list of localities, that this last-named species has an extremely wide geographical range. The others are much more restricted in their habitats.

DIADEMA.

Section A. Discoidal cell closed in all the wings.

Subsection a. Wings not marked with a number of small black spots at the base on the under side.

Division *. Wings broad. Club of Antennæ thick. (Diadema.)

1. DIAD. BOLINA Boisduval, Faune Ent. de Madag. p. 39.

♂ *Papilio Bolina* Linnaeus, *Syst. Nat.* II. p. 781. n. 188.; *Fabricius*, *Ent. Syst.* III. pt. 1. p. 126. n. 384.; *Clerck*, *Icon.* t. 21.; *Cramer*, *Pap.* t. 65. f. E. F.; *Drury*, I. pl. 14. f. 1, 2.; *Herbst*, *Papil.* pl. 244. f. 3, 4.

Nymphalis Bolina Godart, *Enc. M.* IX. p. 396. n. 157.

Apatura Bolina Zink. *Somm.* in *Acta Acad. Nat. Cur.* XV. p. 194.

♀ *Papilio Misippus* Linnaeus, *Syst. Nat.* II. p. 767. n. 158.; *Godart*, *Enc. M.* IX. p. 394. n. 153.

Papilio Diocippus Cramer, *Pap.* pl. 28. f. B. C.; *Herbst*, *Pap.* t. 155. f. 3, 4.; *Fabricius*, *Ent. Syst.* III. pt. 1. p. 51. n. 158.

♀ *Papilio Inaria* Cramer, *Pap.* pl. 214. f. A. B.; *Herbst*, *Papil.* t. 157. f. 5, 6.

Africa, Cayenne (Godart), Surinam (Boisd. MS.), Guiana, Isle of Bourbon, Mauritius, Madagascar, Bengal, China, Sunda Islands, Java, New Holland, East Coast of Africa, Sierra Leone, Ashanti.

B. M.

2. DIAD. PANDARUS.

♂ *Papilio Pandarus* Linnaeus, *Mus. Lud. Utr.* p. 198., *Syst. Nat.* II. p. 748. n. 18.; *Esper*, *Aust. Schmett.* t. 40. f. 1.

Papilio Callisto Fabricius, *Ent. Syst.* III. pt. 1. p. 109. n. 338.; *Cramer*, *Pap.* t. 24. f. A. B.; *Godart*, *Enc. M.* IX. p. 394. n. 154.; *Lucas*, *Hist. Nat. Lep. Exot.* pl. 70. f. 1.

♀ *Papilio Pipleis* Linnaeus, *Mus. Lud. Utr.* p. 285., *Syst. Nat.* II. p. 775. n. 159.; *Fabricius*, *Ent. Syst.* vol. III. pt. 1. p. 105. n. 324.; *Clerck*, *Icon.* t. 26. f. 3, 4.; *Cramer*, *Pap.* t. 60. f. A. B.; *Hübner*, *Samml. exot. Schm.* Bd. i. pl. —. Bd. ii. pl. —.

Diadema Pipleis Boisduval, *Foy. de l'Astrolabe*, p. 137.

Java, Amboyna.

B. M.

3. DIAD. LASINASSA.

♂ *Papilio Lasinassa* Fabricius, *Ent. Syst.* III. pt. 1. p. 127. n. 386.; *Cramer*, *Pap.* pl. 205. f. A. B.; *Godart*, *Enc. M.* IX. p. 395. n. 155.; *Lucas*, *Hist. Nat. Lep. Exot.* pl. 70. f. 2.

Papilio Auge Cramer, *Pap.* t. 190. f. A. B.

♂ *Papilio Liria* Fabricius, *Ent. Syst.* III. pt. 1. p. 126.; *Godart*, *Enc. M.* IX. p. 395. n. 156.

Papilio Alcithoe Cramer, *Pap.* pl. 80. f. A. B.; *Hübner*, *Samml. exot. Schm.* Bd. i. pl. —.

♀ *Papilio Nerina* Fab. *Ent. Syst.* III. pt. 1. p. 133. n. 410.; *Donovan*, *Ins. of New Holl.* pl. 27. f. *.

♀ var. *Papilio Iphigenia* Cramer, *Pap.* t. 67. f. D. E.

♀ var. *Papilio Proserpina* Cramer, *Pap.* t. 218. f. C. D.

♀ var. *Papilio Alceme* Cramer, *Pap.* t. 67. f. A.

♀ var. *Papilio Antigone* Cramer, *Pap.* pl. 67. f. C.

♀ var. *Papilio Manilia* Cramer, *Pap.* t. 255. f. A. B.

♀ var. *Papilio Eriphile* Cramer, *Pap.* pl. 376. f. A. B.

♀ var. *Papilio Melita* Cramer, *Pap.* pl. 28. f. D. E.

♀ var. *Papilio Porphyria* Cramer, *Pap.* pl. 255. f. E. F.

♀ var. *Papilio Jacintha* Fabricius, *Ent. Syst.* III. pt. 1. p. 60. n. 187.; *Jones*, *Icon.* IV. t. 51.; *Donovan*, *Ins. China*, pl. 37. f. 1.; *Drury*, *Ill. Append.* vol. II. pl. 21. f. 1, 2.

♀ *Papilio Avia* Fabricius, *Ent. Syst.* III. pt. 1. p. 111. n. 342.

Papilio Perimele Cramer, *Pap.* pl. 65. f. C. D. pl. 67. f. B.

♀ var. *Papilio Velleda* Cramer, *Pap.* pl. 349. f. C. D.

India, Amboyna, Java, Moluccas, Navigator's Islands. B. M.

4. DIAD. ALIMENA.

Papilio Alimena Linnaeus, *Syst. Nat.* II. p. 780. n. 178.; *Clerck*, *Icon.* t. 32. f. 1.; *Cramer*, *Pap.* t. 221. f. A. B. C.;

Fabricius, *Ent. Syst.* III. pt. 1. p. 134. n. 412.; *Godart*, *Enc. M.* IX. p. 396. n. 158.; *Lucas*, *Hist. Nat. Lep. Exot.* pl. 71. f. 1.

Java, Amboyna.

B. M.

5. DIAD. SALMACIS.

Papilio Salmacis Fabricius, *Ent. Syst.* III. pt. 1. p. 132. n. 408.; *Drury*, *Ill.* vol. II. t. 8. f. 1, 2.; *Herbst*, t. 166. f. 5, 6.; *Jones*, *Icon.* vol. V. t. 63. f. 1.

Nymphalis Salm. Godart, *Enc. M.* IX. p. 397. n. 159.; *Lucas*, *Hist. Nat. Lep. Exot.* pl. 71. f. 2.

Diad. Salmacis Doubl. Westw. & Hewitson, *Gen. Diurn. Lep.* pl. 39. f. 1.

Papilio Omphale Stoll, *Suppl. Cramer*, pl. 26. f. 1, 1A.

Sierra Leone, Ashanti, Guinea (Amboyna, Stoll).

B. M.

6. DIAD. ANTILOPE.†
Papilio Antilope Cramer, Pap. t. 183. f. E. F.; Godart, Enc. M. ix. p. 397. n. 160.
Java, Moluccas, Northern India. B. M.

7. DIAD. VITELLIA.
Papilio Vitellia Fabricius, Ent. Syst. iii. pt. 1. p. 115. n. 353.; Cramer, Pap. pt. 349. f. E. F.; Godart, Enc. M. ix. p. 397. n. 161.
Amboyna.

8. DIAD.? SULPITIA.
Papilio Sulpitia Fabricius, Ent. Syst. iii. pt. 1. p. 245. n. 765.; Jones, Icon. vol. v. pl. 30. f. 1.; Godart, Enc. M. ix. p. 392. n. 149.
Africa (Godart), Indies (Fabricius).

Division **. Wings elongate-triangular. Club of Antennæ slender.
(Penthema E. Doubl.)

9. DIAD. LISARDA.
D. Lisarda E. Doubleday in Ann. Nat. Hist. xvi. p. 233. (1845).
Penthema Lisarda E. Doubl. MS., Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 39. f. 3.
Nymphalis Euphrone Westw. Cabinet Orient. Entomol. p. 55. pl. 27. f. 1. (1847).
Sylhet, Assam. B. M.

Subsection b. Wings thickly marked with a number of small black spots at the base on the under side.

Division *. Wings triangular. (Panopea Hübn.)

10. DIAD. SEMIRE.
Papilio Semire Fabricius, Sp. Ins. tom. ii. p. 88., Ent. Syst. iii. pt. 1. p. 114. n. 351.; Cramer, Pap. t. 194. f. B. C.; Godart, Enc. M. ix. p. 392. n. 147.
Papilio Hippolyte Drury, Appendix vol. iii. pl. 14. f. 3, 4.
Panopea Semira Hübn., Verz. bek. Schm. p. 39. n. 340.
Guinea, Sierra Leone. B. M.

11. DIAD. LUCRETIA.
Papilio Lucretia Cramer, Pap. t. 45. f. C. D.
Nymphalis Lucretia Godart, Enc. M. ix. p. 392. n. 148.
Panopea Lucretia Hübn., Verz. bek. Schm. p. 39. n. 341.
Guinea, Western Africa. B. M.

12. DIAD. HOSTILIA.
Papilio Hostilia Drury, Ill. vol. iii. App. pl. 28. f. 3, 3.; Jones, Icon. v. pl. 81. f. 1.; Fabricius, Ent. Syst. iii. pt. 1. p. 130. n. 399.; Godart, Enc. M. ix. p. 393. n. 150.
Papilio Metea Stoll, Suppl. Cram. pl. 25. f. 2. 2B.
Sierra Leone.

Division **. Wings elongate. (Pseudacræa Westw.)

13. DIAD. HIRCE.
Papilio Hirce Drury, Ill. iii. t. 28. f. 22.
Diadema Hirce E. Doubleday in Ann. Nat. Hist. vol. xvi. p. 182.
Western Africa, Ashanti. B. M.

14. DIAD. EURYTA.
Papilio Euryta Linnæus, Mus. Lud. Ulr. p. 221., Syst. Nat. vol. ii. p. 757. n. 69.; Clerck, Icon. t. 31. f. 4. 4a.; E. Doubleday in Ann. Nat. Hist. vol. xvi. p. 232. (not Acræa Euryta Godart).
Western Tropical Africa. B. M.

15. DIAD. BOISDUVALII E. Doubleday in Ann. Nat. Hist. xvi. p. 180.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 37. f. 3.
Ashanti. B. M.

Section B. Discoidal cell not closed in all the wings.

Subsection a. Discoidal cell of the hind wings open. (Euralia Westw.)

16. DIAD. DUBIA.
Papilio dubia Palisot de Beauvois, Ins. Afr. et Am. Lép. t. 6. f. 2.
Diadema dubia Boisduval, Faune Entomol. de Madagascar, p. 40.
Sierra Leone, Congo, Ashanti, Tintingue, Tamatave, St. Marie, Madagascar. B. M.

17. DIAD. ANTHEDON.
Diadema Anthedon Boisduval MS.; E. Doubleday in Ann. Nat. Hist. vol. xvi. p. 180.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 37. f. 2.
Sierra Leone, Ashanti. B. M.

Subsection b. Discoidal cell of all the wings open. (Hestina Westw.)

Division *. With the second branch of the subcostal vein of the fore wings arising close to the origin of the upper disco-cellular vein.

18. DIAD. ASSIMILIS.
Papilio assimilis Linnæus, Syst. Nat. ii. p. 782. n. 194.; Cramer, Pap. pl. 154. A.; Esper, Pap. Exot. t. 57. f. 1.; Fabricius, Ent. Syst. iii. pt. 1. p. 39. n. 114.; Clerck, Icon. t. 16. f. 1, 2.; Drury, Illust. i. pl. 17. f. 3, 4.; Godart, Enc. M. ix. p. 393. n. 157.
Hestia ass. Hübn., Verz. bek. Schm. p. 15. n. 70.
China. B. M.

19. DIAD. PERSIMILIS Westw. nov. sp.†
Northern India. Coll. East Ind. House, B. M.

20. DIAD. CONSIMILIS Westw. nov. sp.‡
Northern India. Coll. East Ind. House.

21. DIAD. NAMA.
Diadema Nama Boisduval MS.; E. Doubleday in Ann. Nat. Hist. xvi. p. 232.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 39. f. 2.
Assam, Sylhet, and Northern India. B. M.

Division **. With the second branch of the subcostal vein of the fore wings arising at a considerable distance beyond the extremity of the discoidal cell.

22. DIAD. NYCTELIUS E. Doubleday in Ann. Nat. Hist. vol. xvi. p. 182.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 37. f. 1.
Sylhet. B. M.

23. DIAD.? PIMPLEA.
Cynthia Pimplea Erichson in Acta Acad. Nat. Cur. xvi. Suppl. p. 405. pl. i. f. 5.
Island of Luzon (Manilla).

† The male of D. Antilope has the fore wings on the upper side glossed all over with rich dark purple, and the white markings are less decided than in the female.

‡ Diadema nigra, albo-maculata, D. assimili valde affinis, at minor, alis anticis longioribus, maculis intermediis magis rotundatis, serieque subapicali obsoleta; alis posticis maculis parvis albis in loco macularum rubrarum, alis omnibus subtus multo pallidioribus absque maculis rubris. Exp. alar. antic. unc. $2\frac{1}{2}$.

§ Diadema alis albis, anticis costa, venis, strigis tribus obliquis limboque apicali nigris; posticis albis venis angustè limbo apicali (albo-maculato) nubilaque transversa abbreviata pone medium, nigris; his subtus ad basin macula parva chermesina notatis. Exp. alar. antic. unc. $3\frac{1}{10}$.

Obs. In the two new species here described, the second branch of the subcostal vein arises about the length of a line beyond the anterior extremity of the discoidal cell.

Genus LVII. **GODARTIA.***GODARTIA Lucas.**ANTHORA Boisd.**EUXANTHE Hübn. Verz. bek. Schm.***BODY** robust; head, collar, and breast maculated; wings very large.**HEAD** moderately large, with a slight frontal tuft.*Eyes* prominent and naked.*Labial Palpi* small, rather slender, directed upwards, and porrected to about half the length of the head, covered with short thick scales. The basal joint short; second joint slightly curved, with a tuft of hairs on the upper side near the tip, extending inwards, so as to cause the apical joints of the palpi to be wide apart; terminal joint very short, and obtuse at the tip. *Maxillæ* long, extending to the base of the hind legs.*Antennæ* rather short, about two fifths of the length of the fore wings of the male, but scarcely equal to one third of those of the female, nearly straight; with the club gradually formed, rather slender, occupying about one fourth of the whole length of the antennæ, slightly keeled on the under side.**THORAX** rather robust, with the neck nearly equal to the head in width, and half its length. Metathorax wider and oblong, with the scutellum very convex, and the metathorax with oblique tufts of hair at the sides. Wings very large and broad.*Fore Wings* in the males with the inner margin so much elongated, that the extremity of the wing appears transversely truncate. Fore margin very much arched and slightly serrated, about one fourth longer than the entire body. Outer margin about two thirds of the length of the anterior margin, slightly externally curved. Inner margin about five sixths of the length of the fore margin, very slightly emarginate in both sexes. Costal vein very strong at the base, extending to nearly five sixths of the length of the fore margin, emitting a very rudimental short spur-like branch to the costa, at a little distance before or beyond the junction of the extremity of the second branch of the subcostal with the costa (this spur may be considered as the extremity of the costal branch, and the apparent extremity of the costal vein as the extremity of the first and second subcostal branches coalescing together). Subcostal vein slender, much arched at the base, with the first branch arising about one fourth of the length from the base; it is about one fifth of the length of the fore margin, and, instead of extending to the costa, is united to the costal vein, as is also the second branch of the subcostal, which arises close to the former, and extends but a little beyond it: the subcostal vein, at a little distance beyond it, is slightly angulated. The third branch arises at about two fifths of the length of the wing, and extends to the costa just beyond the extremity of the costal vein, whence it runs quite close to the costa, nearly to the tip of the wing. The fourth branch is remarkably elongated, being more than half the length of the wing; it is bent downwards near its middle, so that it reaches the apical margin at a little distance below the apex; the terminal portion of the wing rather arched, and reaching the apical margin still lower. Upper disco-cellular vein short, equal in length to the space between the second branch of the subcostal and the base of the upper disco-cellular, oblique; middle disco-cellular also oblique, rather longer and slightly curved; lower disco-cellular about twice the length of the middle one, scarcely curved, very oblique, uniting with the third branch of the median vein at a little distance from its base, closing the discoidal cell in an acute point just before the middle of the wing; beyond which the third branch of the median vein is curved; inner vein nearly straight.*Hind Wings* very wide, subtriangular. Costal margin slightly curved. Outer margin entire. Precostal vein strong, short, scarcely curved. Costal vein slightly curved. Subcostal vein branching at about one fourth of the length of the wing. Upper disco-cellular slightly curved, forming the base of the discoidal vein, and arising at a very little distance from the branch of the subcostal; lower disco-cellular obsolete; the cell long, narrow, and open. Median vein with its first branch arising beyond the base of the discoidal; the third branch arising very near the middle of the wing.*Fore Legs* of the male very short, but thick, and densely clothed with scales, and the tarsi with scaly hairs; the latter are as long and thick as the tibia, and, when denuded of scales, the apex, previously clothed with white scales, exhibits a distinct articulation, but is destitute of apical claws. *Fore Legs* of the female longer than those of the male, robust; the tarsal portion two thirds of the length of the tibia, and obliquely truncate at the tip, which is armed with several pairs of short spines, indicating the joints discovered on denuding the limb.*Four Hind Legs* moderately long, robust, and thickly scaly. Tibia two thirds as long as the femur, spiny beneath; tibial spurs short. Tarsi nearly as long as the tibia, spiny beneath. Claws very much curved.

Paronychia bifid; the outer lacinia longest and pointed. Pulvillus broad, short, and leathery.

ABDOMEN moderately robust, dilated, and hairy at the base.

This is a very well-marked genus, and is distinguished by its structural characters, such as the remarkable arrangement of the veins of the anterior portion of the fore wings; the first and second branches of the subcostal vein running into the costal one, which, after

joining the costa, throws off another branch, which, more strictly speaking, is to be regarded as the terminal part of the second subcostal branch, which for a portion of its length has coalesced with the costal vein; whilst the fourth subcostal branch arises almost at the middle of the length of the wing. The singularly rounded fore margin of the wing, the short thick legs, which are jet black with white spots, and the short antennæ, are also noticeable characters, as well as the peculiar style of the colouring of the species, which are natives of Tropical Africa and Madagascar. The females have paler-coloured spots, and their wings are of a more ordinary form, so that they might be mistaken for some overgrown species of *Danaïdæ*.

GODARTIA.

1. GODARTIA EURINOME.

Papilio Eurinome Fabricius, Spec. Ins. ii. 101. n. 443;
Cramer, pl. 70. f. A.; Donovan, Ins. of India, pl. 34.
 f. 3.

Nymphalis Eurinome Godart, Enc. M. ix. p. 398. n. 162,
Euxanthe Eurinome Hübner, Verz. bek. Schm. p. 39. n.
 339.

Anthora Eurin. Boisduval MS.; E. Doubleday, List Lep.
Brit. Mus. p. 99.

Godartia Eurin. Doubl. Westw. & Hewitson, Gen. Diurn.
Lep. pl. 38. f. 1.

Sierra Leone, Congo, Ashanti.

B. M.

2. GODARTIA MADAGASCARIENSIS.

Godartia Mad. Lucas in Annales Soc. Ent. France, 1842.
 t. xi. p. 299. pl. 12. n. 2. f. 1, 2.

Anthora Amakosa Boisduval MS.?
 Madagascar.

Genus LVIII. ROMALÆOSOMA.

ROMALÆOSOMA *Blanchard.*

EUPHÆDRA and NESSÆA *Hübner, Verz. bek. Schm.*

EVENA *Boisduval MS.*

BODY very robust; wings large, scalloped; antennæ very long and straight.

HEAD broad, not tufted.

Eyes very large, prominent, naked.

Labial Palpi slightly compressed, ascending, reaching nearly to the level of the top of the eyes, thickly clothed with fulvous scaly hairs, very slightly porrected in front; the tips converging and pointed, so as to resemble a pair of short conical mandibles when seen from above. Basal joint clothed beneath with longer hairs, as well as the upper surface of the middle joint towards the extremity; terminal joint very minute, concealed by hairs.

Antennæ very long, straight, slender, nearly half as long as the fore wings; terminated by a long very slender club, gradually formed and finely keeled beneath.

THORAX very robust. Collar and tippets woolly. Metathorax hairy.

Fore Wings large, trigonate. Fore margin much rounded; apical angle rounded. Apical margin two thirds of the length of the fore margin, curved outwardly towards the apex, but emarginate in the middle, more or less scalloped. Inner margin nearly straight, but little longer than the apical one. Subcostal vein with the first and second branches arising before the extremity of the discoidal cell, the anterior angle of which is placed at about one third of the length of the wing from the base; third branch of the subcostal vein arising at a little distance beyond the extremity of the discoidal cell, and extending to the tip of the wing; fourth branch arising at about four fifths of the length of the wing. Upper disco-cellular vein extremely short; middle one longer, curved; lower disco-cellular straight, very oblique, very slender, being scarcely visible except on denuding the wing of its scales, arising below the curve of the middle disco-cellular, and uniting with the third branch of the median vein at a little distance beyond its origin, this third branch being considerably curved; the discoidal cell is consequently acute at its tip, which reaches nearly to the middle of the wing.

Hind Wings large, suboval, more deeply scalloped. Precostal vein strong, curved, and directed outwards. Subcostal vein branched near its base. Upper disco-cellular vein forming the base of the discoidal vein, scarcely curved, arising at a very little distance from the base of the subcostal branch; outer disco-cellular extremely slender, not or scarcely perceptible except on denuding the membrane of the wing, arising at a rather longer distance from the base of the upper disco-cellular than exists between the latter and the base of the subcostal branch, and uniting with the median vein close to the base of its third branch.

Fore Legs of the male small, pectoral, and thickly clothed with fine long hairs. Tibia slightly curved, nearly as long as the femur. Tarsus fully two thirds of the length of the tibia, cylindrical, exarticulate, and destitute of unguis. Fore Legs of the female short, rather slender, scaly. Femur with a fringe of fine hairs within. Tibia not so long as the femur. Tarsus more than half the length of the tibia, well articulated; the first joint not armed with spines beneath; the second, third, and fourth short, each armed with two small spines; fifth minute and simple.

Four Hind Legs long, strong, and very spiny, except the femur, which is scaly. Tibial spurs strong. Tarsi very spinose, both above and beneath; basal joint of the tarsi as long as all the rest together; terminal joint

minute. Claws very small, curved, much shorter than the terminal hairs of the last joint. Paronychial bifid, slender, the outer division as long as the claws. Pulvillus short, broad, leathery. ABDOMEN moderately long and robust.

TRANSFORMATIONS unknown.

This is a genus of large African butterflies, distinguished by their robust structure, the oblique pale mark beyond the middle of the fore wings of most of the species, the large discoidal patch of green or bluish-green colour on the hind wings, and the black spots on their under surface. Structurally they are distinguished by the very slight projection of the palpi; the long, slender, straight antennæ; and the third branch of the subcostal vein of the fore wings arising at a very little distance beyond the anterior extremity of the discoidal cell. The species composing the first section are further distinguished by the large pale spots on the upper surface of the body, as well as by the red discs of the wings of several of them. *R. Perseis*, belonging to this section, has the hind wings produced into a small tail-like lobe at its anal angle; whilst *R. Cato*, belonging to the second section, has the fore wings of a much more elongate triangular form than the rest of the species. The insects of this second section appear to be very inconstant in their colours, and it is probable either that they are considerably more numerous than is indicated in the following list, or that several are but varieties of *P. Medon*, as suggested by Godart, as well as by Smeathman, who had better opportunities of judging of this point, having collected them in the neighbourhood of Sierra Leone. His observations, communicated to Drury, are as follows: "There are several *Papiliones* nearly of this colour, that is to say, with the upper sides of the wings having a changeable purple, and the under sides being inclinable to green, sometimes with marks of the most beautiful crimson. The differences between them arise so gradually, that I think them varieties of the same species, some, apparently very different, being found coupled together. They are all found congregating in the paths and in the thick shade of a forest, ten or a dozen in a circle round a little puddle or moist spot, and seem to like the most gloomy places."

ROMALÆOSOMA.

Section I. *Body extremely robust, and marked on the upper side with large pale spots.*

1. ROM. PERSEIS.

Papilio Perseis Drury, *Ill.* ii. t. 21. f. 3, 4.; *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 137. n. 423.; *Jones*, *Icon.* v. t. 90. f. 2.; *Godart*, *Enc. M.* ix. 391. n. 144. (*Nymphalis* Pers.)

Ashanti, Sierra Leone.

B. M.

2. ROM. ELEUS.

Papilio Eleus Drury, *Ill.* iii. t. 12. f. 1, 2.; *Jones*, *Icon.* v. t. 22. f. 2.; *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 51. n. 156. (but not *P. Elea* *Fab.* *Ent. Syst.* iii. pt. 1. p. 141.); *Donovan*, *Nat. Repos.* vol. iv. t. 113.; *Godart*, *Enc. M.* ix. p. 391. n. 145. (*Nymphalis* El.); *Blanchard*, *Hist. Nat. An. Artic.* (Laporte) iii. p. 448. (*Romal.* El.)

Sierra Leone, Ashanti, Congo.

B. M.

3. ROM. PRATINAS *E. Doubl. MS.*

Romal. Pratinas Doubl. *Westw. & Hewitson*, *Gen. Diurn. Lep.* pl. 38. f. 3.

Ashanti.

B. M.

4. ROM. ZAMPA, new sp.†

Sierra Leone.

B. M.

Section II. *Body less robust, not marked with pale spots.*

Subsection *. *Fore wings not acute at the tip. Palpi fulvous.*

5. ROM. CERES.

Pap. Ceres *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 82. n. 246. *Euphædra Ceres* *Hübner*, *Verz. bek. Schm.* p. 39. n. 344. *Pap. Lucilla* *Cramer*, t. 156. f. A. C. *Nymphalis Medon* var. *Godart*, *Enc. M.* ix. p. 389. n. 140.

Sierra Leone, Ashanti.

B. M.

6. ROM. IANASSA.

Papilio Ianassa *Linnaeus*, *Syst. Nat.* ii. 781.; *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 121. n. 371.?

Nymphalis Medon var. *Godart*, *Enc. M.* ix. p. 389. n. 140.

Aterica Pholus *Van der Hoeven*, *Tijd. voor Nat. Gesch.* vii. p. 266. t. 5. f. 1a, 1b.

Guinea, Sierra Leone, Ashanti.

B. M.

7. ROM. EDWARDSII.

Aterica Edwardsii *Van der Hoeven*, *Tijd. voor Nat. Gesch.* xii. p. 252. pl. 4. f. 1a, 1b.

Guinea.

8. ROM. THEMIS.

Najas hilaris *Themis* *Hübner*, *Samml. exot. Schm.* Band i. pl. —.

Euphædra Th. *Hübner*, *Verz. bek. Schm.* p. 39. n. 342. Western Africa, Ashanti.

B. M.

9. ROM. CYPARISSA.

Papilio Cyparissa *Cramer*, t. 156. f. B.

Euphædra Cyparissa *Hübner*, *Verz. bek. Schm.* p. 39. n. 343.

Nymphalis Medon var. *Godart*, *Enc. M.* ix. p. 389. n. 140.

Western Africa, Ashanti.

B. M.

10. ROM. SOPHRON *E. Doubl. MS.*

Romal. Sophron Doubl. *Westw. & Hewitson*, *Gen. Diurn. Lep.* pl. 38. f. 2.

Sierra Leone.

B. M.

11. ROM. ZEUXIS *Westw. MS.*

Papilio Medon *Cramer*, t. 205. f. B. C. (but not *P. Medon* *Linnaeus*.)

Euphædra Ceres *Hübner*, *Verz. bek. Schm.* p. 39. n. 344. Congo.

B. M.

12. ROM. CYRNA.

Nymphalis Cyrna *Godart*, *Enc. M.* ix. p. 386. n. 121.

Evena Cyrna *Boisd. MS.*

Western Africa.

13. ROM. FRANCINA.

Nymphalis Francina *Godart*, *Enc. M.* ix. p. 390. n. 141. Guinea.

14. ROM. NARVA.

Papilio Narva *Fabricius*, *Ent. Syst.* iii. p. 249. n. 775.; *Jones*, *Icon.* iv. t. 67. f. 1.

Africa.

15. ROM. CATO.

Papilio Cato *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 83. n. 258. *Papilio Cyparissa* *Cramer*, t. 39. f. D. E.; *Hübner*, *Verz. bek. Schm.* p. 39. n. 343. (*Euphædra* Cyp.)

† *Romal. Zampa* *Westw. MS.* *R.* alis supra obscure sericeo-viridibus, anticis striga interrupta tenui obliqua pone medium, apice extremo, maculaque prope angulum analem albis; alis posticis macula parva nigra baseos strigae ferruginea in cellula discoidali; limbo obscuriori, serie macularum albarum submarginali notato: subtus fulvis, pone medium viridi tinctis albo-maculatis, maculisque tribus nigris in cellula anticarum, alteraque parva rotunda in cellula posticarum; his etiam striga pallida subcostali; corpore albo maculato. Exp. alar. antic. unc. 3½. An var. singularis *Romal. Elei* ♂?

- Nymphalis Medon var. *Godart, Enc. M.* ix. p. 389. n. 140.
Sierra Leone. B. M.
16. ROM. EUPALUS.
Papilio Eupalus *Fabricius, Ent. Syst.* iii. pt. 1. p. 48. n. 148.; *Jones, Icon.* ii. t. 73. f. 2.
P. Harpalyce *Cram* t. 145. D.E.?
Nessæa Harpalyce *Hübner, Verz. bek. Schm.* p. 41. n. 361.
Nymphalis Erithonius *Godart, Enc. M.* ix. 390. n. 142.
Western Africa, Sierra Leone. B. M.
17. ROM. MEDON.
Papilio Medon *Linnaeus, Syst. Nat.* ii. 753. n. 43.; *Clerck, Icon.* t. 28. f. 1.; *Drury, Ill.* ii. t. 15. f. 1, 2.
Western Africa, Ashanti. B. M.
18. ROM. ARCADIVS.
Papilio Arcadius *Fabricius, Ent. Syst.* iii. pt. 1. p. 151. n. 463.; *Jones, Icon.* v. t. 38. f. 1.; *Donovan, Nat. Repos.* iv. t. 155.; *Godart, Enc. M.* ix. p. 385. n. 117.
(Nymphalis A.)
Western Africa, Ashanti. B. M.
- Subsection **. *Fore wings acutely falcate at the tip. Palpi brown.*
19. ROM. n. sp.
Sierra Leone. B. M.
20. ROM. n. sp.
Tropical Western Africa. B. M.

Genus LIX. EURYPHENE.

EURYPHENE *Boisduval.*NYMPHALIS p. *Godt.*ADOLIAS p. *Doubleday.*

BODY robust; hind wings large, entire; antennæ long; palpi erect.

HEAD moderately wide, with a small conical tuft between the antennæ.

Eyes very prominent and naked.*Antennæ* very long, straight; terminated by a gradually formed, rather robust club, occupying about one fifth of the antennæ, finely keeled beneath.*Labial Palpi* rather long, erect, elevated considerably above the level of the eyes, and applied close to the face, so that they extend but little in front, scaly, finely hairy beneath at the base, and on the back of the terminal half of the second joint; third joint minute and conical.

THORAX robust and woolly, especially on the metathorax.

Fore Wings moderately large. Costa very much arched. Apical angle rather acute. Apical margin straight, scarcely more than two thirds of the length of the anterior. Posterior margin three fourths of the length of the anterior, nearly straight. First and second branches of the subcostal vein arising before the extremity of the discoidal cell; third branch arising very near to, but beyond, the cell; fourth branch arising very near to the tip of the wing. Upper disco-cellular vein very short, transverse, arising at a little distance before the middle of the wing, opposite to the base of the third branch of the median vein; middle disco-cellular short, and curved towards the base of the wing; lower disco-cellular short, very slender, although distinct, uniting with the third branch of the median vein at a little distance beyond its base; the third branch much curved.*Hind Wings* suboval. Outer margin entire, or not strongly scalloped. Precostal vein much curved. Subcostal arising opposite the base of the precostal. Discoidal cell closed by a very thin, and almost indistinct, lower disco-cellular vein.*Fore Legs* of the male small, pectoral, feathered. The tarsus two thirds the length of the tibia. *Fore Legs* of the female scaly, very short. The tarsus about two thirds of the length of the tibia, and furnished beneath with several pairs of small spines, indicating the articulations.*Four Hind Legs* very long. Tibiæ and tarsi finely spined beneath.

ABDOMEN rather small.

TRANSFORMATIONS unknown.

The chief character which I have found to separate this group of African butterflies from the adjacent genera consists in the close proximity of the third branch of the subcostal vein to the anterior extremity of the discoidal cell in the fore wings, the closed condition of the discoidal cell in all the wings, and the generally acute tips of the fore wings. The species are, moreover, of small size, and dull brown or reddish colours, with oblique bars of darker tints; the markings on the under side of the wings being ill-defined. *E. Sophus* is closely allied to the two terminal species of *Romaleosoma*, and, like them, has the fore wings more strongly hooked than any of the other species.

There are at least five or six unnamed species in the British Museum collection, descriptions of which, unaccompanied by careful figures, would be insufficient to identify them. It is probable that others are identical with various African species described by *Fabricius*, which for the same reason it is almost impossible to identify. I have added a list of several of these, which seem from their descriptions to be referable to this group.

EURYPHENE.

1. EUR. SOPHUS.

Papilio Sophus Fabricius, Ent. Syst. iii. pt. 1. p. 46. n. 141.; Jones, Icon. iv. t. 72. f. 1.; E. Doubl. List Lep. Brit. Mus. p. 102. (Adolias S.); Godart, Enc. M. ix. pl. 399. n. 167.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 43. f. 4.

Sierra Leone, Congo.

B. M.

2. EUR. ABSOLON.

Papilio Absolon Fabricius, Ent. Syst. iii. pt. 1. p. 56. n. 174.; Godart, Enc. M. ix. p. 388. n. 134.

Euryphene Guineensis? Boisduval MS.

Guinea, Ashanti.

B. M.

3. EUR. CÆRULEA.

Euriphene cærulea Boisduval in Delagorgue, Voy. Sud-Afrique, p. 592.

South Eastern Africa.

4. EUR. AUGE.

Papilio Auge Fabricius, Ent. Syst. iii. pt. 1. p. 248.; Godart, Enc. M. ix. p. 387. n. 126.; Donovan, Ins. India, pl. 36. f. 4.

Western Africa? ("In Indiis." Fabr.)

5. EUR. DORICLEA.

Papilio Doriclea Drury, Ill. iii. pl. 36. f. 5, 6.; Fabricius, Ent. Syst. iii. pt. 1. p. 248. n. 772.; Godart, Enc. M. ix. p. 386. n. 124. (Nymphalis D.)

Sierra Leone.

6. EUR. COCALIA.

Papilio Cocalia Fabricius Ent. Syst. iii. pt. 1. p. 250.; Donovan, Ins. India, pl. 36. f. 1.; Godart, Enc. M. ix. p. 405. (Nymphalis C., but not Cocala Cramer or Herbst.)

"In Indiis." Fabr. (Africa, teste Boisduval in litt.)

7. EUR.? MIRUS.

Papilio Mirus Fabricius, Ent. Syst. iii. pt. 1. p. 48. n. 146.; Godart, Enc. M. ix. p. 387. n. 129.

—?

8. EUR.? DEMETRA.

Nymphalis Demetra Godart, Enc. M. ix. p. 389. n. 138.

Western Africa.

9. EUR.? DÆDALUS.

Papilio Dædalus Fabricius, Ent. Syst. iii. pt. 1. p. 53. n. 162.; Godart, Enc. M. ix. p. 388. n. 131.

Guinea.

10. EUR.? HONORIUS.

Papilio Honorius Fabricius, Ent. Syst. iii. pt. 1. p. 151. n. 464.; Jones, Icon. vi. pl. 67. f. 1.; Donovan, Nat. Repository, iv. pl. 119.

—? (Africa?)

11. EUR.? CYRNA.

Nymphalis Cyrna Godart, Enc. M. ix. p. 386. n. 121.

Western Africa.

Genus LX. ATERICA.

ATERICA Boisduval, Blanchard.

CATONEPHELE and HAMANUMIDA Hübner.

BODY rather slender and elongate. Wings large, veins not thick; fore ones elongate-triangular; hind ones large, rounded, entire, and but slightly scalloped.

HEAD transverse, nearly as broad as the thorax, with two very small tufts between the eyes.

Eyes naked, prominent.

Antennæ long, slender; terminated by a moderately long, gradually formed, slender club, finely keeled beneath.

Labial Palpi very small and slender, scaly, directed upwards obliquely, scarcely reaching the level of the middle of the eyes, scaly. Basal joint beneath, and upper side of the second joint beyond the middle, clothed with rather short hairs; terminal joint very minute.

THORAX oval, moderately hairy.

Fore Wings elongate, triangular. Fore margin much curved; apical angle slightly rounded. Apical margin scarcely more than half the length of the anterior one, nearly straight. Inner margin about one fourth longer than the apical one. Costal vein rather strong. Subcostal one slender, with the first and second branches arising before the anterior extremity of the discoidal cell; third branch arising at about three fourths of the length of the wing, reaching nearly to the apex of the costa; fourth branch very short; terminal part of the vein rather deflexed. Upper disco-cellular arising at the length of one third of the wing, extremely short, oblique; middle disco-cellular longer, rather curved outwardly; lower disco-cellular very thin, but distinct, transverse, four times as long as the middle one, uniting with the third branch of the median vein just beyond its origin, thus closing the cell at some distance before the middle of the wing; third branch of the median vein much arched.

Hind Wings very large, suboval, or nearly rounded. Costa angulated and truncated near its base. Outer margin slightly scalloped. Precoastal vein strongly bent outwardly beyond the middle, where it throws off a slight branch towards the body. Subcostal vein branched at a little distance from the base. The upper disco-cellular forming the slightly curved base of the discoidal; lower disco-cellular wanting, so that the cell is open.

Fore Legs of the male very minute, thin, and finely downy. Tibia two thirds of the length of the femur. Tarsus nearly as long as the tibia, exarticulate. *Fore Legs* of the female nearly twice as long again as those of the male, very thin. Femur hairy. Tibia and tarsus scaly; the latter two thirds as long as the tibia, with several pairs of minute spines near the tip, indicating the intermediate joints; the basal joint being much the longest.

Middle and Hind Legs with the joints of dissimilar length. The femur of the middle leg being one third longer than the tibia, and bent. Tibia with a little brush of very short hairs near the base in the male; hind tibia rather longer than the femur. Tibial spurs very slender. Tibiæ and tarsi armed with very fine short spines. Ungues much curved. Outer lacinia of the paronychia nearly as long as the claws.

ABDOMEN rather slender.

TRANSFORMATIONS unknown.

The insects composing this genus are natives of Africa and the adjacent islands, but they are very rare in collections; of moderate size, and dull, or but slightly brilliant, in their colours. The type of the genus is the Madagascar A. Rabena, with which A. Cupavia tolerably well agrees. These have a pale oblique bar, or a row of spots across the fore wings from the middle of the fore margin towards the anal angle, and some additional spots near the apex of the fore wings; but other species which have been added to the genus differ from the preceding, not only in having the discoidal cell of all the wings closed, but also in the style of their colouring: thus A. Meleagris is of a greyish dun colour above, marked with a great number of small white dots, each with a black ring; whilst the males of A. Veronica are dark blue on the upper surface, with darker markings, and the females are dull red-brown, with a white oblique bar. A. Lysandra is very similar to the female of Veronica on the upper side, but the under side is quite different. I have added Afer to the genus on account of its resemblance to the male of Veronica; but it is brilliantly glossed with purple, the hind wings are truncated near the anal angle, the second branch of the subcostal vein arises beyond the extremity of the discoidal cell, and the cell of the hind wing is open, as in Rabena. Smeathman informs us that, notwithstanding its brilliant colours, this species frequents thick dark places in the woods of Tropical Africa.

ATERICA.

Division *. *Hind wings with the discoidal cell open.*

Subdivision a. *Second branch of the subcostal vein arising before the extremity of the discoidal cell.*

1. ATER. RABENA.

Aterica Rabena Boisduval, *Faune Entomol. de Madag.* t. 8. f. 2.

Catonephele Rabana Hübner, *Samml. exot. Schm.* Band iii. pl. —.

Aterica Rabena? E. Doubl. *List Lep. Brit. Mus.* p. 101.; *Doubl. Westw. & Hewitson, Gen. Diurn. Lep.* pl. 43. f. 3.

Tintingue, Tamatave, Madagascar, Western Africa. B. M.

2. ATER. CUPAVIA.

Papilio Cupavia Cramer, t. 193. f. E. F.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 152. n. 467.

Nymphalis Cup. *Godart, Enc. M.* ix. p. 382. n. 105.

Aterica Cupavia Boisduval MS.; *Doubl. List Lep. Brit. Mus.* p. 101.

Catonephele Cupavia Hübner, *Verz. bek. Schm.* p. 40. n. 351.

Sierra Leone, Ashanti. B. M.

Subdivision b. *Second branch of the subcostal vein arising beyond the extremity of the discoidal cell.*

3. ATER. AFER.

Papilio Afer Drury, *Illustr.* iii. pl. 36. f. 1, 2.; *Stoll, Suppl. Cram.* t. 27. f. 3, 3 B.

Papilio Æthiopa Fabricius, *Ent. Syst.* iii. pt. 1. p. 136. n. 420.; *Godart, Enc. M.* ix. p. 385. n. 119. (Nymphalis Æth.)

Aterica Afer E. Doubleday, *List Lep. Brit. Mus.* App. p. 27.

Evena Afra Boisduval MS.

Iaera Afra Hübner, *Verz. bek. Schm.* p. 38. n. 332.

Tropical Western Africa. B. M.

Division **. *Hind wings with the discoidal cell closed.*

4. ATER. MELEAGRIS.

Papilio Meleagris Cramer, pl. 66. f. A. B.; *Drury, Ill.* iii. pl. 27. f. 3, 4.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 128. n. 393.; *Godart, Enc. M.* ix. p. 387. n. 130. (Nymphalis M.); *E. Doubl. List Lep. Brit. Mus.* p. 102. (Aterica? M.)

Hamanumida Meleagris Hübner, *Verz. bek. Schm.* p. 18. n. 104.

Var. Papilio Melantha Fabricius, *Ent. Syst.* iii. pt. 1. p. 128. n. 394.; *Godart, Enc. M.* ix. p. 388. n. 132.

Sierra Leone, Ashanti. B. M.

5. ATER. LYSANDRA.

Papilio Lysandra Stoll, *Suppl. Cram.* pl. 29. f. 3, 3 C.; *Godart, Enc. M.* ix. pl. 387. n. 125.

Symphædra Lys. Hübner, *Verz. bek. Schm.* p. 40. n. 348.

Sierra Leone. B. M.

6. ATER. VERONICA.

Papilio Veronica Cramer, pl. 325. f. C. D.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 151. n. 164.; *Jones, Icon.* v. t. 36. f. 2.

Nymphalis Ver. *Godart, Enc. M.* ix. p. 385. n. 118.

Aterica Ver. E. Doubl. *List Lep. Brit. Mus.* p. 101.

♀ Papilio Gnidia Fabricius, *Ent. Syst.* iii. pt. 1. p. 137. n. 422.; *Jones, Icon.* v. t. 37. f. 2.; *Donovan, Ins. India,* pl. 32. f. 2.

Nymphalis Gnidia *Godart, Enc. M.* ix. p. 386. n. 123.

Hamanumida Veronica Hübner, *Verz. bek. Schm.* p. 18. n. 103.

Sierra Leone, Ashanti. B. M.

Genus LXI. HARMA.

HARMA, EUPITHES, and ADOLIAS p. E. Doubleday.

CYMOThOE and APATURA p. Hübner.

NYMPHALIS p. Godt.

BODY robust; wings large, with the apical margin of the fore ones generally emarginate, all marked beneath in the discoidal cell with slender black characters, and with one or more rows of pointed lunules near the outer margin.

HEAD moderate-sized, with a slight frontal tuft.

Eyes prominent, naked.

Antennæ rather long, straight; terminated by a very slender club.

Labial Palpi rather elongated, obliquely porrected, extending nearly to twice the length of the head, clothed with scaly hairs, especially on the upper side of the middle joint beyond the middle. Terminal joint small, oval.

THORAX oval, moderately robust, woolly; wings large.

Fore Wings with the anterior margin very much arched; apical angle often rather acute. Apical margin variable in outline, generally emarginate and scalloped, three fourths of the length of the anterior. Inner margin nearly straight, longer than the apical one. First and second branches of the subcostal vein arising before the extremity of discoidal cell; third branch arising at about half the distance between the discoidal cell and the tip of the wing; fourth branch arising near the tip of the wing. Discoidal cell extending to about two fifths of the length of the wing. Upper disco-cellular vein very short; middle one short, curved; lower one much longer, slightly curved, extending to the third branch of the median vein, at a little distance from its origin, closing the discoidal cell; third branch of the median vein much arched.

Hind Wings large, scalloped along the outer margin. Precostal vein obliquely arched outwardly. Discoidal cell open in the typical species, but closed by a very delicate angulated outer disco-cellular vein in others.

Fore Legs of the male very small, brush-like, feathered on each side. Tarsus very short, not more than one fourth of the length of the tibia. Fore Legs in the female much longer than those of the male, very slender.

Tarsus more than half of the length of the tibia, finely spined near the tip beneath.

Four Hind Legs rather short. Tarsi with numerous very short spines beneath.

ABDOMEN rather slender.

TRANSFORMATIONS unknown.

The butterflies composing this genus, as here restricted, are of a larger size than those of the two preceding, and not only variable in the form of their wings, but also in the arrangement of their veins, so that it is with some hesitation that I have united them into a single group; thus, whilst *Harma Theobene* has the anal angle of the fore, as well as of the hind, wings produced in both sexes, in *A. Egesta* the hind wings alone are produced in this part. The last-named species has the margin of the wings almost entire, whilst in *Alcimedea*, *Althea*, and several fine new allied species in the British Museum collection, the margin of all the wings is scalloped, and the fore ones are angulated below the apex, resembling *Vanessa Laomedea* and its allies. Most of the species are, however, distinguished by a narrow dark straight line, running obliquely across all the wings beyond the middle, on the under side. The male of *H. Theobene*, figured in our Plate XL. fig. 3., has the under side of the wings fulvous buff, thickly powdered with dark brown atoms, and with various markings, very slightly indicated, at the base of the wings. The female of this species is extremely dingy in its appearance, being dark brown, with the buff and orange patches of the male replaced by a sooty white colour. *H. Sangaris* is remarkable for the vivid red colour of its upper surface, whilst *Egesta* and some allied species are of a yellowish buff. The insect figured in our Plate XLI. under the name of *Pallene Eupithes* has so entirely the habit and general appearance of *H. Canis* that I cannot separate them generically, although in the former species the discoidal cell of all the wings is open, whilst in the latter it is closed in all. Moreover, *Eupithes* has the second branch of the subcostal vein of the fore wings inserted beyond the extremity of the discoidal cell.

These species appear to be the African representatives of the Eastern butterflies composing the genus *Adolias*.

HARMA.

Division A. Fore wings with the discoidal cell closed, and the second branch of the subcostal vein arising before the anterior extremity of the cell.

Subdivision a. Hind wings with the discoidal cell open.

Section *. All the wings with the anal angle produced.

1. HARMA THEOBENE.

Adolias Theobene Boisduval MS.; E. Doubl. List Lep. Brit. Mus. p. 102.

Harma Theobene E. Doubl. MS.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 40. f. 3.

Ashanti.

B. M.

Section **. All the wings rounded at the anal angle.

2. HARMA ALCIMEDA.

Nymphalis Alcimedea Godart, Enc. M. ix. p. 384. n. 112.; *E. Doubl. List Lep. Brit. Mus.* p. 102. (*Adolias Alc.*)

Cape of Good Hope.

B. M.

3. HARMA FUMANA Westw. nov. sp.†

Ashanti.

B. M.

Subdivision b. Hind wings with the discoidal cell closed, as well as that of the fore wings.

4. HARMA ALTHEA.

Papilio Althea Cramer, pl. 89. f. E. F.; *Drury, Ill.* iii. t. 20. f. 1. 2.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 113. n. 347.; *Godart, Enc. M.* ix. p. 383. n. 111. (*Nymphalis Alth.*); *E. Doubl. List Lep. Brit. Mus.* p. 102. (*Adolias Alth.*)

Cymothoe Althea Hübner, Verz. bek. Schm. n. 337. p. 39. Ashanti.

B. M.

5. HARMA EGESTA.

Papilio Egesta Cramer, pl. 46. f. C. D.; *Godart, Enc. M.* ix. p. 369. n. 68.; *E. Doubl. List Lep. Brit. Mus.* p. 102. (*Adolias Eg.*)

Apatura Egesta Hübner, Verz. bek. Schm. n. 299.

Ashanti.

B. M.

† *Harma alis repandis, anticis sub apicem subangulatis, flavescentibus limbo tenui maculaque magna marginis interni fumosis; posticis fumosis limbo latiori flavescenti punctis 7 parvis fuscis submarginalibus margine extremo fusco; alis omnibus subtus dimidio basali luteo albido fuscoque eleganter marmoratis, striga tenui obliqua communi ferruginea submedia et pone strigam fuscis subnebulosis. Expans. alar. anticarum (♂) unc. 3 $\frac{1}{8}$.*

6. HARMA SANGARIS.

Nymphalis Sangaris Godart, *Enc. M.* ix. p. 384. n. 114.;
Lucas, Hist. Nat. Lepid. Erot. pl. 69. f. 2.; *E. Doubl. List Lep. Brit. Mus.* p. 102. (Adolias S.)

Ashanti.

B. M.

7. HARMA CÆNIS.

Papilio Cænis Drury, *Ill.* ii. pl. 19. f. 12.; *Godart, Enc. M.* ix. p. 142. n. 85. (Pieris C.); *E. Doubl. List. Lep. Brit. Mus.* p. 102. (Adolias C.)

Papilio Amphiceda Cramer, pl. 146. f. D. E.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 113. n. 348.; *Godart, Enc. M.* ix. p. 384. n. 113. (*Nymphalis* A.)

Cymothoe Amphiceda Hübner, *Verz. bek. Schm.* n. 336. p. 39.
 Western Africa, Ashanti.

B. M.

8. HARMA JODUTTA Westw. nov. sp.†
 Ashanti.

B. M.

Division B. All the wings with the discoidal cell open. (*Pallene* *E. Doubleday MS.*)

9. HARMA EUPITHES.

Pallene Eupithes *E. Doubleday MS.*; *Doubl. Westw. & Hewitson, Gen. Diurn. Lep.* pl. 41. f. 1.

Adolias Neocles Boisduval *MS.*

Cape of Good Hope.

B. M.

Genus LXII. ADOLIAS.

ADOLIAS Boisduval, *E. Doubleday, Kollar.*

ACONTHEA Horsfield.

NYPHALIS p. Godt.

SYMPHÆDRA, EUTHALIA, and CYMOTHOE, Hübner.

BODY more or less robust; antennæ long and straight; wings large, generally of dull colours, with narrow, irregular, dark marks in the discoidal cell.

HEAD wide, scarcely tufted in front.

Eyes large, prominent, naked.

Antennæ of very great length, slender, filiform at the base; beyond the middle very gradually incrassated to a long, cylindrical, abruptly terminated, slightly curved club, having two very slender raised lines on the under side, with an impression between them.

Labial Palpi small, very slightly projecting beyond the head, and elevated to the level of the middle of the eyes, Second joint lengthened, and apparently increasing in breadth exteriorly, in consequence of the ridge of hairs on its upper side, beyond the middle; third joint very minute. Palpi of the males larger than those of the females.

Tongue spiral, of moderate length, robust, compressed towards the extremity, and provided with lateral spreading ciliæ.

THORAX more or less robust, clothed with woolly hairs; wings generally of large size, with moderately strong veins.

Fore Wings somewhat triangular, with a lengthened, boldly curved costa; apical angle generally but slightly rounded. Apical margin variable, but generally a little emarginate in the middle, and scarcely scalloped; nearly three fourths of the length of the anterior. Inner margin about as long as the apical one, nearly straight. Costal vein strong, reaching a little beyond the middle of the costa. Subcostal vein with the first and second branches arising before the anterior extremity of the discoidal cell; third subcostal branch arising at a little distance beyond, or sometimes close to, the extremity of the discoidal cell; and the fourth branch arising at about four fifths of the length of the wing. Upper disco-cellular vein extremely minute and almost obsolete, arising from the subcostal at about one third of the length of the wing; middle disco-cellular short, curved, and directed toward the base of the wing; lower disco-cellular vein obsolete in the typical species, so that the cell is open. Median vein strong; its third branch moderately curved.

Hind Wings rounded, slightly acuminate at the anal angle in the males of some species, slightly scalloped along the outer margin. Costal margin slightly rounded. Precostal vein curved outwards. Subcostal vein branching near its base. Upper disco-cellular forming the scarcely curved base of the discoidal vein; lower disco-cellular wanting, so that the narrow cell is open.

Fore Legs of the male very short and slender. Femur clothed beneath with long divergent hairs. Tibia nearly as long as the femur, thickly clothed with downy hairs. Tarsus consisting of a single elongated attenuated joint, covered with a dense uniform down. Fore Legs of the female scaly, with the first joint of the tarsi greatly elongated, the three following short, the last abruptly terminated; with several pairs of spines beneath, indicating the three intermediate joints through the scales of the limb.

Four Hind Legs moderately long, the middle pair in the males with the femur nearly one fourth longer than that of the hind legs, thickly scaly. Middle tibia of the males with a thick coat of very short scaly hairs near the

† *Harma* alis integris, anticis apice acuto, posticis angulo anali parum producto; anticis albidis basi fumosis, limbo lato irregulari fusco; posticis fuscis plaga magna costali subtriangulari albida serieque submarginali lunularum nigrarum; alis omnibus subtus dimidio basali albido brunneo fuscoque variegatis, striga tenui obliqua communi fusca; pone strigam obscure albidis subnebulosis serieque subapicali punctorum nigrorum (♂). *Expans. alar. antic. unc.* 2½.

base beneath, and with two rows of short thick spines in all the tibiæ. Tarsi considerably shorter than the tibia, rather thickly clothed at the sides and beneath with very short spines. Claws rather large and very much curved. Paronychia small, bifid.

ABDOMEN variable in size and thickness, according to that of the thorax.

CATERPILLAR chilopodomorphous, linear, lengthened, provided on each side with ten long, attenuated, spreading, brachiform appendages of nearly equal length, consisting of a midrib and lateral beards, decreasing in length towards the extremity, and imitating the structure of a very delicate plume, being armed with a terminal spike composed of a dense whorl of short robust spines. Feet short, minute, and entirely concealed by the lateral appendages.

CHRYsalis short, angular, attenuated at both ends; with two sides even, and the third or ventral surface gently swelled or rounded; consisting of unequal pyramidal portions, the abdominal portion being the longest, and provided with two points, whilst the angles are armed with a few short spines, which are more robust at the union of the two pyramids; the longitudinal and transverse ridges ornamented with a delicate gold streak.

The characters above described are derived from the typical species, *A. Aconthea*, and other closely allied Javanese species, amongst which, however, there is considerable diversity, both in the shape of the wings, especially of the hind wings of the males, and the robustness of the body; thus the body of the male of *A. Lubentina* is as large and thick as in the most robust *Hesperia*. This species is also remarkable for its rich appearance, produced by the contrast of its vivid carmine spots on a dark olive-green ground; the female being further distinguished, like the same sex in several other species, by the white, oblique, maculated bar ornamenting the fore wings, and running from the middle of the fore margin to the anal angle.

The males of other species, such as *A. Cocytina*, *Cocytus*, and *Dirtea*, are distinguished by a broad band of delicate blue colour, extending along the posterior margin of the hind wings, and running sometimes partly along that of the fore wings. The numerous white spots on the wings of the female of *A. Dirtea* (Pl. XLIV. fig. 1.) are almost entirely wanting in the male, the body of which is also destitute of similar spots. The beautiful *A. Nesimachus* of Boisduval is remarkable for the double series of very delicate white zigzag lines along the outer portion of all the wings. With these exceptions, the colours of these insects are generally dull brown, often with a greenish gloss, with slender, dark, irregular lines in the discoidal cell of all the wings, and often with paler and darker arched or waved marks beyond the middle of the wing. There is also some difference in the condition of the discoidal cell of the wings of these insects. In the typical species it is entirely open in all the wings. In *A. Dirtea*, however, it is closed in the fore wings; the lower disco-cellular vein being slender but distinct in the male, whereas in the female it is almost obsolete, and only to be seen on removing the scales from the wings. In *A. Nesimachus*, *Nicea*, *Evelina*, and two large undescribed Chinese species in my collection, the discoidal cell of all the wings is distinctly closed. There is also considerable variation in the outline of the wings of the different species, varying from the rounded apical margin of *A. Apaturina* to the hooked and deeply emarginate one of *Cocytus* and *Evelina*; whilst the hind wings of the males are almost triangular in *A. Lubentina*, whereas they are quite rounded in *A. Dirtea*.

The very curious structure of the Caterpillar and Chrysalis of the typical species of this genus, observed in India and Java by General Hardwicke and Dr. Horsfield (whose generic description, published in the *Zoological Journal*, is partially incorporated in the preceding character), at once removes this group from all the other genera of Nymphalidæ. The Larva of *Adolias Aconthea* is represented in Dr. Horsfield's drawings as pale green, with the little whorl of bristles of a black colour at the end of each of the long filamentous processes; and, in General Hardwicke's notes and drawings in the British Museum, it is stated that a precisely similar caterpillar was found at Dum-Dum, in the month of July, on the leaves of a *Bryonia*, and another on *Trophis aspera* in March. The change to the pupa is stated to have taken place in December, and the perfect butterfly appeared on the 30th of that month. In a specimen of the Chrysalis, with which I have been favoured by Dr. Horsfield, I find the surface of the leaf, to which it is attached by the tail, coated for the space of an inch with silk, into which the numerous little spines at the extremity of the body are thrust, whereby the insect is suspended. The head-case is terminated by two short conical horns. Each wing-case has a very acute diverging ridge running along the inner margin of the fore wing, and terminating in a conical point exactly over the anal angle of the fore wings, with a dark spot in the middle of the back, at the extremity of the mesonotum; and the third abdominal segment is elevated into an acute conical ridge running between the two middle conical protuberances, whilst the terminal segment of the body is furnished with a number of little tubercles symmetrically arranged.

A peculiarity which is also to be found in other Eastern groups exists in the Geographical Range of these insects, namely, that they occur in the islands of the Indian Ocean and various parts of Northern India, whilst scarcely any are found in Central India; thus I possess specimens of *A. Lubentina* from Assam, China, and Java, whereas there was not a single individual of the genus in Col. Hearsey's collection from Central India. Other instances will be seen in the localities of the different species.

The merit of first determining this highly interesting genus, as well as of clearing up the synonymy of two of its most interesting species, is due to Dr. Horsfield, whose generic name, *Aconthea*, I should have adopted, had it not been established in opposition to the rule which forbids the alteration of specific names; Dr. Horsfield having in this instance followed the bad example set by Mr. Swainson, of turning the specific name of the typical species into a generic one, and then giving a new specific name to the type.

Dr. Horsfield, whose views of the analogical relations of animals are in accordance with those of Mr. MacLeay, observes that "the metamorphosis of this genus is very remarkable, and strikingly illustrates the analogy which exists between the forms of the individuals of the class *Ametabola*, and the larvæ of *Diurnal Lepidoptera*. The nearest representative of our genus among the *Ametabola*, with which I am acquainted, is *Scutigera*. This annulose animal, although disposed in the *Chilopodomorphous*, is close to its union with the *Thysanuriform Stirps*; and *Aconthea*, in the series of *Lepidoptera*, follows immediately after *Biblis* and *Limenitis*, leading gradually to *Apatura*."

The species of this genus are very numerous, there being at least sixty or seventy in our different metropolitan collections. Many of them are very obscure in their markings, and it is only by means of excellent figures that they can be properly determined. It is on this account that many of the Fabrician species are very difficult, if not impossible, to be ascertained, and hence it is that I have been compelled to add a point of doubt to several of the species at the end of the following list.

Mr. E. Doubleday appears to have proposed to separate the species with very robust bodies and small triangular hind wings in the males under the name of *Itanus*; but as this group would include the types of the genus, for which the name *Adolias* must be retained, and as the group, in its extended sense, appears to be a very natural one, I have not adopted this mode of subdivision.

ADOLIAS.

1. ADOLIAS ACONTHEA.

Papilio Aconthea Cramer, t. 134. f. D. E. F. G.; *Godart, Enc. M.* ix. p. 383. n. 109. (*Nymphalis Aconth.*); *E. Doubl. List Lep. Brit. Mus.* p. 103. (*Adolias Aconth.*); *Hübner, Verz. bek. Schm.* p. 39. n. 338. (*Cymothoe Aconth.*)

♂ *Nymphalis Disconthea Godart, Enc. M.* ix. p. 384. n. 115. *Aconthea primaria Horsfield, Descr. Cat. Lep. Ins. E. Ind. Comp.* pl. 8. f. 6. larva, pupa, and details.

Java. B. M.

2. ADOL. NICEA.

Aconthea Nicea G. R. Gray, Lep. Ins. of Nepaul, p. 13. pl. 12. f. 1.; *E. Doubl. List Lep. Brit. Mus.* p. 105. (*Adolias Nic.*, but not *Niceus Fabr.*)

Northern India, Nepaul, Dukhun. B. M.

3. ADOL. COCYTINA.

Aconthea Cocytina Horsfield in Zool. Journ. v. p. 67. t. 4. f. 3, 3a.

Papilio Cocyta Fabricius, Ent. Syst. iii. pt. 1. p. 127. n. 388. (but not *Papilio Cocytus Fabr.*); *Jones, Icon.* iv. t. 64. f. 2.; *Godart, Enc. M.* ix. p. 38. n. 107. (*Nymphalis C.*); *E. Doubl. List Lep. Brit. Mus.* (*Adolias Cocyta.*)

Northern India, Dukhun, Moulmein, Malabar. B. M.

4. ADOL. APATURINA.

♂ *Aconthea Apaturina Horsfield in Zool. Journ.* v. p. 68. pl. 4. f. 1, 1a.

Nymphalis Japis Godart, Enc. M. ix. p. 382. partim.

Adolias Godartii G. R. Gray, Lep. Ins. Nepaul, p. 14. t. 12. f. 2.

♀ *Hypolimnas Coresia Hübner, Samml. Exot. Schm.* Band ii. pl. —; *E. Doubl. List Lep. Brit. Mus.* p. 105. (*Adolias Cor.*)

Java, Sumatra. B. M.

5. ADOL. TEUTA.

Adolias Teuta E. Doubl. MS.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 44. f. 2.

Sylhet. B. M.

6. ADOL. DUNYA.

Adolias Dunya E. Doubl. MS.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 44. f. 2.

Northern India. B. M.

7. ADOL. EVELINA.

Papilio Evelina Stoll, Suppl. Cram. pl. 28. f. 2, 2B.; *Godart, Enc. M.* ix. p. 401. n. 174. (*Nymphalis Ev.*); *E. Doubl. List Lep. Brit. Mus.* p. 104. (*Adolias Ev.*)

Nymphalis Evelina Hübner, Verz. bek. Schm. p. 40. n. 347.

Moulmein, Assam. B. M.

8. ADOL. JAPIS.

Nymphalis Japis Godart, Enc. M. ix. p. 382. n. 106.; *Lucas, Hist. Nat. Lep. Exot.* pl. 69. f. 1.; *E. Doubl. List Lep. Brit. Mus.* p. 104. (*Adolias Jap.*)

Java. B. M.

9. ADOL. COCYTUS.

Papilio Cocytus Fabricius, Ent. Syst. iii. pt. 1. p. 55. n. 171. (but not *Pap. Cocyta Fabr.*); *Godart, Enc. M.* ix. p. 368. n. 63.

Adolias Sidera Boisduval MS.

Siam, Northern India. B. M.

10. ADOL. LUBENTINA.

Papilio Lubentina Fabricius, Ent. Syst. iii. pt. 1. p. 121. n. 370.; *Cramer*, pl. 255. f. C. D.; *Donovan, Ins. China*, pl. 36. f. 3.; *Godart, Enc. M.* ix. p. 40. n. 172. (*Nym-*

phalis Lub.); *Horsfield, Descr. Cat. Lep. Ins. E. India Comp.* pl. 5. f. 5. (*Aconthea L.*); *E. Doubl. List Lep. Brit. Mus.* p. 103. (*Adolias L.*)

Euthalia Lubentina Hübner, Verz. bek. Schm. p. 41. n. 358.

Java, China, Assam.

B. M.

11. ADOL. ADONIA.

Papilio Adonia Cramer, pl. 255. f. C. D.; *Godart, Enc. M.* ix. p. 400. n. 173. (*Nymphalis Ad.*); *Hübner, Verz. bek. Schm.* p. 41. n. 359. (*Euthalia Ad.*)

— ?

12. ADOL. NESIMACHUS.

Adolias Nesimachus Boisduval in Cuv. R. An. ed. Crochard, Ins. pl. 139. f. 1.

Northern India, Assam, Dukhur.

B. M.

13. ADOLIAS PHEMIUS.

Itanus Phemius E. Doubleday MS.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 41. f. 4.

Silhet.

B. M.

14. ADOL. FRANCIAE.

Adolias Franciæ G. R. Gray, Lep. of Nepaul, p. 12. pl. 14. f. 1, 2.; *E. Doubl. List Lep. Brit. Mus.* p. 104. (*Adolias Fr.*)

Northern India, Nepaul, Silhet.

B. M.

15. ADOL. DOUBLEDAYI.

Adolias Doubledayi Boisduval MS.; E. Doubleday, List Lep. Brit. Mus. p. 104. (but not of *Westw. Cab. Or. Ent.*); *Gray, Lep. Ins. Nepaul*, p. 13. t. 13.

Aconthea Epeona G. R. Gray MS. olim. (but not of *Godart, Enc. M.* ix. p. 179.)

Adolias Patala Kollar in Hugel, Reise durch Kaschmir, p. 435.

Northern India, Nepaul, Mussooree.

B. M.

16. ADOL. CONFUCIUS *Westw. nov. sp.**

China.

17. ADOL. DIRTEA.

Adolias Dirtea G. R. Gray, Descr. Lep. Nepaul, p. 12. (♂ ♀) pl. 10. f. 1, 2.

Aconthea Boisduvalii G. R. Gray MS.; Boisduval, Spec. Gen. Lep. i. t. 8. f. 2. (*Adolias Boisd.*)

♀ *Papilio Dirtea Fabricius, Enc. M.* iii. pt. 1. p. 59. n. 184.; *Jones, Icon.* iv. pl. 65. f. 1.; *Doubl. Westw. & Hewitson, Gen. Diurn. Lep.* pl. 44. f. 1.

Java, Sylhet, Assam, Penang, Sumatra.

B. M.

18. ADOL. SIVA *Westw. MS.*

Acontia Doubledaii Westw. Cab. Or. Entomol. p. 76. pl. 37. f. 4. (but not of *Boisduval and Gray*).

Sylhet.

19. ADOL.? DAMALIS.

Cynthia Damalis Erichson in Acta Acad. Nat. Cur. xvi. p. 404. t. L. f. 4.

Island of Luzon (Manilla).

20. ADOL.? ALPHEDA.

Nymphalis Alpheda Godart, Enc. M. ix. p. 384. n. 116.

Bengal.

21. ADOL.? PELEA.

Papilio Pelea Fabricius, Ent. Syst. iii. pt. 1. p. 133. n. 409.; *Godart, Enc. M.* ix. p. 383. n. 110.

East Indies.

22. ADOL.? HESPERUS.

Papilio Hesperus Fabricius, Ent. Syst. iii. pt. 1. p. 47. n. 145.; *Jones, Icon.* iv. t. 73. f. 1.

— ?

* *Adolias* obscure fusco-viridis; alis anticis pone medium obscurioribus characteribus auriformibus nigris ante medium, striga obliqua submedia e maculis sex magnis irregularibus maculisque tribus subapicalibus albidis; posticis macula parva quadrata costali lunulaque adjecta albidis, fasciaeque submarginali fusca; alis subtus viridi-griseis anticis in medio obscurioribus maculis characteribusque ut in pagina superiori; posticis etiam characteribus nonnullis nigris versus basin fasciaeque undata alba pone medium e costa fere ad angulum analem extensa. Expans. alar. antic. unc. 4 $\frac{1}{2}$.

Obs. The discoidal cell of all the wings is closed in this species, which is the largest known, except *A. Dirtea*. It is closely allied to *A. Doubledayi*.

23. ADOL. ? DERMA.
Adolias ? Derma Kollar in *Hugel's Reise durch Kaschmir*,
p. 436.
Himalaya, Mussooree.

24. ADOL. ? MONINA.
Papilio Monina Fabricius, *Ent. Syst.* III. pt. 1. p. 127.
n. 390.; Godart, *Enc. M.* IX. p. 383. (Nymphalis ?
Mon.)
East India.

25. ADOL. SENOPE Boisduval MS.
Java, India.

B. M.

Obs. Aconthea Alakara Horsf. appears to us to belong to the genus Limenitis (see ante, p. 276.). It is closely allied to the following, which must be added to that genus.

LIMENITIS MARTHA.

- Papilio Martha Fabricius, *Ent. Syst.* III. pt. 1. p. 139. n. 429.;
Godart, *Enc. M.* IX. p. 388. n. 133.
Siam. Mus. Banks.

Genus LXIII. ENISPE E. Doubleday MS.

ADOLIAS E. Doubleday, olim.

BODY robust; wings large, subtriangular, marked above with submarginal rows of lunules, and the hind ones beneath with two minute distant ocelli.

HEAD moderate, slightly tufted in front.

Eyes large, prominent, naked.

Labial Palpi scaly, directed upwards, and reaching a little higher than the top of the eyes, advanced but a very short distance in front of the face. Terminal joint minute, oval, nearly upright; middle joint hairy on the back beyond the middle.

Antennæ half the length of the fore wings, slender; with an elongated slender club, occupying about one fifth of the antennæ, slightly bent outwards at the tip, with two fine longitudinal grooves beneath.

THORAX woolly, robust.

Fore Wings large, subtriangular. Fore margin very much arched; apical angle acute. Outer margin straight, a little more than two thirds the length of the anterior. Inner margin nearly straight, scarcely longer than the outer. Costal vein strong. Postcostal with the first branch arising before the anterior extremity of the discoidal cell, and running into the costal vein before the junction of the latter with the costa; second branch obliterated; third and fourth branches arising close together at about five sixths of the length of the wing. Upper disco-cellular vein very short and oblique; middle disco-cellular obliterated; the upper and lower discoidal veins arising together at the junction of the upper and lower disco-cellular veins; the latter considerably arched, very oblique, and united to the third branch of the median vein at the same distance from its base, as exists between the base of the second and third branches of the median, closing the discoidal cell at an acute angle; its anterior extremity extending to two fifths of the length of the wing.

Hind Wings subtriangular. The costal margin much arched. The outer margin slightly scalloped. Precostal vein upright, its extremity bent slightly towards the body. Subcostal vein branching near its base. Upper disco-cellular forming the slightly curved base of the discoidal vein, and arising at a short distance from the base of the subcostal branch; lower disco-cellular wanting, so that the narrow discoidal cell is open at the extremity. Median vein robust, branching much lower in the wing than the branches of the subcostal vein.

Fore Legs of the male minute, pectoral, moderately feathered. The tibia shorter than the femur, and the tarsus nearly equal to the tibia in length, exarticulate, and destitute of apical unguis. (I am unable to describe the structure of the fore legs of the female, all the specimens which I have yet seen of the typical species having been males.)

Four Hind Legs strong. Tibiæ and tarsi armed beneath with rows of minute spines. Middle pair of legs longer than the hind ones. Ungues rather large, sickle-shaped, and very acute.

ABDOMEN moderately robust.

This is a very peculiar Indian form recently introduced into our collections from Sylhet and Assam, allied to Harma and Adolias, but distinguished by its triangular fore wings, and the curious arrangement of the veins of the same wings, which have one of the branches of the postcostal vein obliterated, as well as the middle disco-cellular. The nearest affinity to the typical species is, however, unquestionably, Discophora, a genus which forms the connecting link of the Nymphalidæ and Morphidæ. Unlike that genus, however, the male does not possess the patch of hairs on the disc of the hind wings which is so remarkable a character in Discophora, and from which it takes its name. Some of the more recently received specimens of the only known species are of a far richer and more coppery colour than represented in our figure: the under side is more uniformly coloured, pale fulvous, with a darker oblique fascia extending from the middle of the fore margin of the fore wings to the anal angle of the hind ones, beyond which the latter are marked with two very minute cyclets wide apart.

ENISPE.

1. ADOLIAS EUTHYMIUS E. Doubl. in *Ann. Nat. Hist.* XVI. p. 179. (1845).
Enispe Euthymius Doubl. *Westw. & Hewits. Gen. D. Lep.* pl. 40. f. 2.
Sylhet, Assam, Himalayan region. B. M.

Genus LXIV. **EURIPUS** *E. Doubleday MS.*

BODY robust; hind wings deeply scalloped, with a very short truncated tail in the middle of the hind margin.

HEAD moderate-sized, hairy, scarcely tufted in front.

Eyes large, prominent, naked.

Labial Palpi scaly, obliquely porrected, not elevated much higher than the middle of the eyes, porrected to about half the length of the head; the tips converging, scaly, except at the base beneath, and on the back of the terminal half of the second joint, which are hairy. Terminal joint small, ovate-conic.

Antennæ strong, rather more than half the length of the fore wings; terminated by an elongated, rather slender club, the tip of which is slightly curved outwardly.

THORAX elongate-ovate, robust, woolly, spotted with white in front.

Fore Wings elongate-triangular. Anterior margin not strongly arched; apical angle rather obtuse. Apical margin about two thirds of the length of the anterior, very slightly scalloped, its anterior portion rather convex, but emarginate below the middle; anal angle strongly rounded. Inner margin equal in length to the apical one. Subcostal vein having the first branch arising at about one fourth of the length of the wing; second branch arising rather beyond half the length of the wing; third branch arising at about two thirds of its length, and extending to the tip; fourth branch arising half way between the third and the tip, extending to the apical margin below the apex; terminal portion of the vein more oblique. Upper disco-cellular vein extremely short, transverse, arising at about one third of the length of the subcostal vein; middle disco-cellular very short, curved, forming the base of the lower discoidal vein; lower disco-cellular vein obsolete, so that the discoidal cell is open. Median vein strong; its third branch not strongly arched at the base.

Hind Wings subtriangular. Costal margin much arched at the base. Outer margin deeply scalloped; the margin between the discoidal vein and the third median branch being somewhat elongated into a very short truncated tail. Precostal vein slightly oblique in a direction from the body, and forked at the tip. Subcostal vein branching near the base. The upper disco-cellular forming the straight base of the discoidal vein and the lower disco-cellular obsolete, the cell being open.

Fore Legs of the male small, feathered, and formed as in the last genus; annulated alternately with black and white hairs. (I have not seen a female of this genus, and cannot describe the structure of its fore legs.)

Four Hind Legs formed as in the genus Enispe.

ABDOMEN rather slender.

This is an Indian genus nearly allied to *Adolias* but differing chiefly in the form of the hind wings, and in the style of the colouring, which bears a stronger resemblance to those species of *Diadema* which compose the section to which I have applied the name of *Hestina*. The under side of the species figured in our Plate XLI. is similarly marked to the upper side, except that the dark colour on the disc of the wings is a paler brown, the marginal portion towards the anal angle of all the wings being purple-black; the body beneath is also spotted with black. I am happy in being able to add a second species to the genus, which I received from Assam by the kindness of Major F. Jenkins, which has the fore wings very similar in their markings, but the hind wings have the black veins much less strongly marked, and the inner row of spots near the anal angle of the hind wings is scarlet, the base of the hind wings beneath being also marked with several rich scarlet patches, as in *Diadema consimilis*.

EURIPUS.

1. **EURIPUS HALITHERSES** *E. Doubl. MS., Doubl. Westw. & Hewitson,*
Gen. D. L. pl. 41. f. 2.
 Northern India, Assam. B. M.

2. **EURIPUS HALLIROTHIUS** nov. sp.*
 Assam. Coll. East Ind. House and Westw.

Genus LXV. **HERONA** *E. Doubleday MS.*

BODY robust; wings large; fore wings subangulated below the apex; hind wings deeply scalloped, and marked with transverse pale bars.

HEAD rather small, especially in the females; scarcely tufted in front.

Eyes of moderate size, but very prominent.

* *E. alis anticis nigris albido maculato-striatis; posticis albidis venis anguste nigris, limbo nigro albido-guttato, maculisque quatuor rubris ad angulum analem transverse positis, basi etiam subtus rubro-maculato. Expans. alar. ant. unc. 2 $\frac{1}{2}$.*

Labial Palpi scaly, porrected obliquely, the tip not reaching much higher than the middle of the eyes, extending in front of the head to about its length; the insides parallel, but the outsides oblique; terminating in a point formed by the small terminal joint.

Antennæ nearly straight, slender, about half the length of the fore wings; terminated by a slender club, channeled beneath, with the tip slightly curved.

THORAX robust, woolly, elongate-ovate.

Fore Wings elongate-triangular. Fore margin slightly curved; apical angle rather obtuse. Apical margin about three fifths of the length of the anterior, slightly scalloped, obtusely subangulated below the apex, below which the margin is emarginate. Inner margin nearly straight, and two thirds of the length of the anterior. Veins not strong. The subcostal vein with its first branch arising before the anterior extremity of the discoidal cell, at about one fourth of the length of the wing; the second branch arising close to, but at a very little distance before, the extremity of the cell, at one third of the length of the wing; third branch arising near the middle of the length of the wing; and the fourth at a little more than three fourths of its length. The upper disco-cellular very minute and transverse, emitted from the postcostal at the distance of one third of the length of the wing from the base; middle disco-cellular curved, short, forming the base of the lower discoidal vein; lower disco-cellular vein obsolete, so that the discoidal cell is open.

Hind Wings subovate-triangular. The costal margin straight, except at the arched base. Outer margin deeply scalloped. Precostal vein straight, except at the tip, which is turned outwards. Subcostal vein branching at about one fourth from the base of the wing. The disco-cellular vein arising almost close to the branch, and being almost straight, so as to form portion of the discoidal vein; lower disco-cellular vein obsolete, so that the discoidal cell is open.

Fore Legs of the male small, pectoral, clothed with white downy hairs. The tibia rather shorter than the femur; and the tarsus nearly as long as the tibia, exarticulate. *Fore Legs* of the female about the same length as those of the male, slender, and clothed with fine white scales. The femur and tibia of nearly equal length. The tarsus rather more than half the length of the tibia, obliquely truncate at the tip; the truncated portion armed with four pairs of minute spines, indicating the articulations, which are very short.

Four Hind Legs rather slender, moderately long, scaly. Middle pair longer than the hind ones. Tibial spurs short. Tibiæ and tarsi furnished beneath with several rows of very short spines. Claws short, very much curved. Paronychæ small, bifid.

ABDOMEN elongate, and rather slender.

The Indian butterfly forming the type of this genus has somewhat the appearance of certain species of *Limenitis* in the arrangement of the markings of its wings, but is more nearly allied to *Adolias*: on the under side the wings are much paler, with the colours less marked and more clouded, with a delicate purple gloss on the paler portions of the wings. I only know one species which will enter strictly into the genus.

HERONA.

1. *HERONA MARATHUS* E. Doubleday MS.; Doubleday, Westw. & Hewitson, *Gen. D. Lep.* pl. 41. f. 3.
Northern India, Assam. B. M.

Genus LXVI. SYMPHÆDRA.

SYMPHÆDRA Hübner.

SYMPHEDRA E. Doubleday.

LEXIAS and n. g. Boisduval MS.

BODY moderately robust, woolly; wings large, rounded, and scalloped.

HEAD moderate-sized, woolly, not furnished with a frontal tuft, but with two short tufts at the base of the antennæ, behind each of which is a channel extending to the back of the head.

Eyes moderately prominent, naked.

Labial Palpi scaly, porrected obliquely nearly to the level of the top of the eyes, and extending in front nearly to the length of the head, parallel and closely applied to each other, the insides being clothed with fine hairs, as well as the upper side of the terminal half of the middle joint. Last joint small, pointed at the tip, and not distinguishable except on denuding the palpus of its scales.

Antennæ nearly straight, about half the length of the fore wings; terminated by a slender elongate club, occupying

about one fourth of the length of the antennæ, gradually formed, very slightly curved outwardly at the tip; the inside having a scarcely defined longitudinal keel.

THORAX woolly, especially behind; tippets long and narrow.

Fore Wings large. Anterior margin rather strongly arched; apical angle rounded. Apical margin about two thirds of the length of the anterior, entire, slightly emarginate in the middle. Inner margin two thirds of the length of the anterior. Postcostal vein with the first and second branches arising before the extremity of the discoidal cell; third branch arising close beyond its extremity; fourth branch arising at three fourths of the length of the wing. Upper disco-cellular vein almost obsolete, arising nearly at one third of the length of the wing from the base; middle disco-cellular short, transverse, slightly directed towards the base of the wing; lower disco-cellular obsolete, so that the discoidal cell (the anterior extremity of which scarcely extends beyond the first branch of the median vein) is open; third branch of the median vein regularly arched.

Hind Wings forming a broad oval. Outer margin scalloped. Precostal vein moderately strong, curved outwards. Branches of the postcostal vein arising at a short distance from its base. Discoidal cell open.

Fore Legs in the male very small, thin, and with the tibiæ and tarsi but slightly clothed with elongate hairs. Tarsus about two thirds of the length of the tibia. *Fore Legs* of the female considerably longer than those of the male, scaly. Tarsus about two thirds of the length of the tibia, obliquely truncate at the tip, which is furnished with several pairs of fine spines.

Four Hind Legs formed as in the last genus.

ABDOMEN rather small; robust in the female.

TRANSFORMATIONS unknown.

The above characters are taken from *Papilio Thyelia* of Fabricius, an Indian insect which appears, at first sight, to have some relationship with the fritillary butterflies; its real affinities are, however, evidently to be met with in the species of *Adolias* and the neighbouring genera. Hübner, in his *Zutrage*, has given a figure of an insect which he names *Symphædra Alcandra*, with Georgia, Florida, as its habitat; but it is unquestionably identical with *Thyelia*, and incorrect in the locality given to it, its true station being Central India, whence Brigadier Hearsey brought a very fine series, some of which are two thirds of an inch wider than our figure. The under surface of the wings is more elegantly varied than the upper; the discoidal cell in all the wings being marked with several pink spots of various forms edged with black, and the hind wings having a whitish bar running obliquely across the middle.

I have followed Hübner in also referring to this genus the *Papilio Æropus* of Linnaeus, which seems most nearly allied to it, differing only in having the lower disco-cellular vein present in the fore wings, thus shutting the discoidal cell transversely at about two fifths of the length of the wing from the base. The first branch of the postcostal vein is also united with the costal one for a short distance, but is emitted again near its apex. The only specimen of this species which I have been able to examine is in the British Museum collection, in a very dilapidated state, wanting the head. It is of a dark brown colour on the upper side, with a broad orange bar running across all the wings just beyond the middle, parallel with the outer margin (paler-coloured in the females), the anterior portion being broken into several distinct spots towards the costa of the fore wing. It is paler-coloured beneath, with several black and white characters towards the base of the wings.

SYMPHÆDRA.

1. SYMPH. THYELIA.

Papilio Thyelia Fabricius, *Ent. Syst.* iii. pl. 1. p. 142. n. 437.; *Jones, Icones*, v. t. 83. f. 2.; *Godart, Enc. M.* ix. p. 257. (*Argynnis* Th.); *Donovan, Ins. of India*, pl. 31. f. 3.; *Doubleday, Westw. & Hewits. Gen. D. Lep.* pl. 42. f. 6.

Symphædra Alcandra Hübner, *Zutrage*, pt. 1. p. 7. fig. 1. 2.; *Hübner, Verz. bek. Schm.* n. 346.

East India.

B. M.

2. SYMPH. ÆROPUS.

Papilio Æropus Linnaeus *Syst. Nat.* ii. 769. 128.; *Mus. Lud. Ultr.* 256.; *Clerck, Icones*, pl. 39. f. 1, 2.; *Fa-*

abricius, Ent. Syst. iii. pt. 1. p. 154. n. 437.; *Jones, Icones*, iii. pl. 62. n. 1.; *Cramer, pl. iii. f. F. G.* (male) 254., A. B. (female).

Nymphalis Æropus Godart, *Enc. M.* ix. p. 399. n. 170.

Lexias Æropus Boisduval, *Voy. de l'Astrolabe, Entomologie*, 1re part. p. 125.

Symphædra Ærope Hübner, *Verz. bek. Schm.* n. 345., *Doubl. Westw. & Hewits. Gen. D. L.* pl. 43. f. 6.

Oreades marm. Europa Hübner, *Samml. exot. Schm.* Band i. pl. —.

Amboyna, Bourou, New Guinea, New Holland.

B. M.

Genus LXVII. **MENERIS.***MENERIS Boisduval MS., E. Doubleday.**TISIPHONE p. Hübner.**NYMPHALIS p. Godt.*

BODY robust, very hairy; fore wings with the discoidal cell extending to the middle of the wing; hind wings beautifully ocellated both above and below.

HEAD moderate-sized, very hairy.

Eyes large, hairy.

Labial Palpi porrected nearly upright in front of the face, extending above the level of the top of the eyes, very hairy, especially in front; terminal joint minute, oval, and very distinct, without denuding the palpus; not extending in front to more than half the length of the head.

Antennæ about half the length of the fore wings; terminated by a long gradually formed club, bent outwards at the tip, which is attenuated, neither carinated nor channeled beneath.

THORAX elongate, ovate, very hairy; wings large.

Fore Wings with the anterior margin not strongly arched; apical angle rounded. Apical margin entire, scarcely emarginate. Inner margin nearly straight. The first branch of the postcostal vein arising at about one third of the length of the wings, followed at a little distance further by the second branch; third branch arising at nearly three fourths, and the fourth branch at about five sixths, of the length of the wing. Upper disco-cellular vein very short, oblique, arising at the distance of half the length of the wing from the base; middle disco-cellular short, transverse; outer disco-cellular considerably longer, transverse, but curved, and uniting with the third branch of the median vein at about the same distance from its base as exists between the first and second branches.

Hind Wings oval, ocellated, very hairy on the disc towards the abdomen. Outer margin scalloped. Precostal vein forming a nearly straight spur, with the tip bent towards the body. Postcostal vein much arched and slender at its base, running parallel with the costal vein from its base until it reaches opposite to the base of the precostal vein, when it takes its ordinary direction, branching at about one fourth of the length of the wing; the upper disco-cellular being thrown off at a little distance from its base, and being arched, and nearly equal in length to the lower disco-cellular, which is also arched, uniting with the third branch of the median vein at a little distance from its base, and closing the discoidal cell in an acute point, extending nearly to half the length of the wing.

Fore Legs of the male very short and pectoral, densely clothed with rather short hairs, forming a nearly cylindrical brush. The femur and tibia of nearly equal length. The tarsus not above one third of the length of the tibia.

Four Hind Legs robust. Femur gradually attenuated and slightly curved, finely hairy. Tibia not so long as the femur, armed all over with short spines. Tibial spurs rather elongated. Tarsus equal to the tibia in length, strongly spined beneath.

ABDOMEN moderate-sized.

The type of this genus is a handsome insect, remarkable for several of its characters which render its location in its present position very doubtful, and appear to indicate a relation with some of the Satyridæ, as proposed by Hübner in his "*Verzeichniss*." These characters consist of the uncarinated club of the antennæ, the very hairy palpi and eyes, the elongated discoidal cell of the fore wings, and the ocellation of the hind ones. We find, it is true, somewhat similar ocellated spots on the under side of the hind wings in *Smyrna* and *Agrias*; but those genera have the scaly palpi of many of the preceding genera.

The under surface of the wings of *M. Tulbaghia* is marked in the same manner as the upper. The species is named after one of the Dutch governors of the Cape of Good Hope with whom Linnaeus corresponded, and who sent the present species to him with others, which Linnaeus states were the first specimens of insects from those regions received in Europe.

MENERIS.**1. MENERIS TULBAGHIA.**

Papilio Tulbaghia Linnaeus, *Mus. Utr.* p. 284., *Syst. Nat.*

ii. p. 775. n. 158.; *Fabricius*, *Ent. Syst.* iii. pt. 1.

p. 105. n. 323.; *Jones*, *Icones*, iii. t. 1; *Cramer*, t.

3. f. E. F.

Nymphalis Tulbaghia Godart, *Enc. M.* ix. p. 400. n. 171.

Oreades marm. Tulbaghia Hübner, *Samml. exot. Schm.* Bd. i. pl. —.

Meneris Tulbaghia Boisduval MS.; *E. Doubleday*, *List of Lep. Brit. Mus.* p. 106.; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 46. f. 3.

South Africa.

B. M.

Genus LXVIII. SMYRNA.

SMYRNA *Hübner, Samml. exot. Sch.*AGRIAS Sect. x. *Boisd. MS.*NYMPHALIS *Fabricius.*

BODY robust, clothed with long woolly hairs; wings large, entire, or but slightly scalloped; the hind ones ocellated beneath.

HEAD moderately large, with a conical tuft in front.

Eyes large, prominent, naked.

Labial Palpi porrected obliquely, compressed, reaching to the level of the top of the eyes, scaly. The middle joint hairy above; terminal joint subhorizontal, terminated in a point, reaching to about the length of the head.

Antennæ about five eighths of the length of the fore wings, straight; terminated by an elongated, rather slender club, occupying one fifth of the length of the antennæ, obliquely truncate at the tip, with two very delicate longitudinal carinæ on the under side.

THORAX elongate-ovate, clothed, especially behind, with long woolly hairs.

Fore Wings large, subtriangular. Fore margin arched; apical angle rather obtuse. Apical margin nearly straight, very slightly scalloped, two thirds of the length of the anterior; hinder angle rounded. Inner margin nearly straight, rather longer than the apical. Veins moderately strong. Costal vein not reaching to the middle of the costa. First and second branches of the postcostal vein arising before the anterior extremity of the discoidal cell; third branch arising about the distance of a line beyond its anterior extremity, and running to the tip of the wing; fourth branch arising at about four fifths of the length of the wing, and extending to the apical margin below the apex. Upper disco-cellular vein very short, arising at one third of the length of the wing; middle disco-cellular short, transverse, arched; lower disco-cellular three times as long as the middle one, very oblique, united to the third branch of the median vein close to its base (this third branch being much arched along its basal one third portion), closing the discoidal cell in an acute point about two fifths of the length of the wing from its base.

Hind Wings ovate. Costal margin much arched. Apical margin rounded, scalloped; the lobe at the extremity of the first branch of the median vein being occasionally enlarged. Inner portion of the wing, including the anal groove, thickly clothed with fine hairs. Under surface of the wings thickly reticulated with black markings and with four elegant ocelli. Precostal vein very much arched; the tip directed outwardly. Costal vein also much arched. Postcostal vein branched near its base. Discoidal cell not closed.

Fore Legs of the male short and pectoral, but very broadly clothed with fine silky hairs. The tibia as long as the femur; and the tarsus depressed, and about two thirds of the length of the tibia, pointed at the tip, and destitute of claws. *Fore Legs* of the female rather shorter than those of the male, scaly, and sparingly clothed with hairs. Femur and tibia of equal length. Tarsus two thirds of the length of the tibia, compressed; the tip obliquely truncated, and armed with several pairs of small spines, indicating the articulations.

Four Hind Legs robust. Middle pair longer than the posterior. Middle tibiae with a space near the base beneath clothed with plush-like hairs. Inner side of the tibiae and tarsi armed with very numerous short spines, arranged in longitudinal series. Tibial spurs very short. Claws very much arched and acute. Outer division of the paronychiae nearly equal in size and similar in form to the claws.

ABDOMEN small, conical in the males, ovate in the females.

No idea can be formed from the figure of the upper surface of the typical species of this genus, represented in our XLVIth plate, of the exquisite beauty of the under surface of the wings; the fore ones are indeed nearly similar on both sides, except that the basal portion is paler, and the apex is grey with white spots and blackish clouds; but the hind wings have a greyish ground colour, and more than half of the basal portion is thickly covered with a multitude of blackish undulated lines and spots, beyond which are four beautiful eye-like spots, the two middle ones smaller than the others. In this respect the genus resembles *Meneris* and *Agrias*, but *Agrias* has the veins of the fore wings arranged in the same curious manner as in *Prepona*.

The species are natives of the New World from Brazil to Mexico, and are of a moderate size.

SMYRNA.

1. SMYRNA *Blomfieldia*.

Papilio Blomfieldia Fabricius, Sp. Ins. ii. p. 84. n. 370.
(1781), *Ent. Syst.* iii. pt. 1. p. 106. n. 326.

Smyrna Blomfieldia Hübner, Samml. Exot. Schmett. Band
ii. pl. —.

Papilio Proserpina Fabr. Ent. Syst. iii. pt. 1. p. 228. n.
713.; *Jones, Icones*, v. t. 24. f. 1.; *Donovan, Drawings*
in Bibl. Hope, Oxford.

Papilio Bella Fabricius, Ent. Syst. iii. pt. 1. p. 79. n. 245.;
Godart, Enc. M. ix. p. 375. n. 85. (*Nymphalis Bella*);

E. Doubl. List. Lep. Brit. Mus. p. 106. (*Agrias Bella*).
Brazil, Mexico. B. M.

Schmett. Band iii. pl.—; Doubl. Westw. & Hewits.
Gen. Diurn. Lep. pl. 46. f. 2.
Mexico. B. M.

2. *SMYRNA KARWINSKII.*
Smyrna Karwinskii Geyer in Hübner, Samml. exot.

Genus LXIX. AGRIAS.

AGRIAS Doubl. in Proc. Zool. Soc. 1848.

AGRIAS Sect. xx. Boisd. MS.

NYMPHALIS p. Godt.

BODY very robust, short, densely clothed with downy hairs; fore wings large, entire; hind wings with a submarginal row of ocelli on the under side.

HEAD wide, clothed with hair, with a conical tuft in front.

Eyes nearly round or slightly oval, prominent.

Maxillæ (or spiral tongue) rather longer than the thorax.

Labial Palpi rather widely separated, ascending rather above the level of the top of the eyes, and but little advanced in front, thickly clothed with scales, which in front are long. Basal joint curved, very short; second more than twice the length of the first; third short, pointed, distinctly visible without denuding the palpus.

Antennæ elongate, about three fourths of the length of the body, gradually tapering from the base to the apex, which is very slightly recurved.

THORAX very large, elongate-ovate, truncate posteriorly, hairy, especially behind.

Fore Wings subtriangular. Anterior margin rounded; apical angle obtuse. Apical margin one third shorter than the anterior, nearly straight, or but slightly sinuated. The inner margin rather longer than the apical, straight. Costal vein short, extending beyond the middle of the costa. Subcostal vein throwing off its first branch about the middle, and the second at a short distance before the anterior extremity of the discoidal cell; the third branch arising at a short distance beyond the cell, and extending to the tip of the wing, followed at an equally short distance by the fourth branch; fourth branch running close to the third nearly to the apex, then bent downwards, and reaching the apical margin about halfway between the apex and the extremity of the terminal portion of the postcostal vein. Upper disco-cellular vein very short, oblique; middle above twice the length of the upper; lower nearly twice the length of the two others combined, uniting with the third branch of the median vein at a little distance from its origin, closing the discoidal cell in an acute point at about three sevenths of the length of the wing. Third branch of the median vein considerably curved.

Hind Wings obovate; the fold for the reception of the abdomen ample. Anterior margin rounded; apical angle obtuse. Apical margin slightly sinuate and scalloped. Precostal vein much curved outwardly. The discoidal cell closed by a slender curved disco-cellular vein, uniting with the third branch of the median just beyond its origin, nearly at the middle of the wing.

Fore Legs of the male —? *Fore Legs* of the female small. The femur and tibia of nearly equal length. The tarsus short, with the basal joint elongated; the remainder very short, transverse, nearly equal.

Middle and Hind Legs stout, rather short. The tibiæ spiny within; the spurs very short. The tarsi spiny at the sides; the first joint also spiny below, equal in length to the rest combined. Claws small, curved. Pulvillus large.

ABDOMEN short, tapering.

This is a genus of small extent, but contains several very richly coloured American species; a vivid crimson colour occupying a great portion of the upper side of the fore wings; the hind wings beneath are varied with a grey and buff ground and black spots and crescents, and a submarginal row of large and splendid ocelli. From the very robust structure of the body these insects must be extremely rapid in their flight. The males of *A. Claudia* have a tuft of long pale hairs on the disc of the hind wings near the body.

AGRIAS.

1. AGRIAS CLAUDIA.

Papilio Claudia Herbst in Der Naturforscher, ix. t. 2;

Fabricius, Ent. Syst. iii. pt. 1. p. 105. n. 325.

Agrias Claudia Boisduval MS.; E. Doubleday, List. Lep.

Brit. Mus. p. 106.

Nymphalis Claudina Godart, Enc. M. ix. p. 421. n. 226.

Nymphalis Annetta G. R. Gray in Griffith's An. Kingd.

Ins. v. ii. p. 676. t. 87

Brazil.

B. M.

2. AGRIAS ÆDON.

Agrias Ædon Hewitson, Proceed. Zool. Soc. Lond. 1848,

p. 46., *Annulos.* pl. 1.; *Doubl. Westw. & Hewitson,*

Gen. Diurn. Lep. pl. 47. f. 1.

New Granada.

Genus LXX. PREPONA.

PREPONA *Boisduval*.MORPHO *Hübner*.NYMPHALIS p. *Godt*.

BODY extremely robust, woolly; fore wings falcate; all the wings marked above with large patches of brilliant metallic colours.

HEAD moderately wide, with a small conical tuft in front.

Eyes prominent, naked.

Labial Palpi erect, or porrected rather obliquely, and rising nearly to, or even higher than, the level of the top of the eyes, but not extending to more than half the length of the head, scaly. The extremity of the upper side of the second joint with rather long hairs; set on erect, and applied to the side of the frontal tuft; the terminal joint minute and subtriangular.

Antennæ long, straight, a little more than half the length of the fore wings, very gradually thickening from the base to the tip; the under surface finely and longitudinally carinated.

THORAX very robust, elongate, truncate behind; neck elongate, woolly.

Fore Wings elongate-trigonal, subfalcate at the tip. Fore margin well arched; apical angle rounded. Apical margin entire, very deeply emarginate, two thirds of the length of the anterior margin. Inner margin nearly straight, equal in length to the apical margin. Costal vein strong, extending to two thirds the length of the costa. Subcostal vein with its first and second branches arising before the anterior extremity of the discoidal cell; the third branch arising just beyond the cell, and the fourth at a little distance beyond the middle of the wing; the third branch extending to the tip of the wing; the fourth running close to it for a considerable distance, and then being obliquely deflexed, so as to be united with the apical margin below the apex. Upper disco-cellular extremely short, arising at the distance of two fifths of the length of the wing from the base; middle disco-cellular short, straight; lower disco-cellular three times as long as the middle one, slightly curved and transverse, closing the discoidal cell by uniting with the third branch of the median vein at about the distance of a line from its origin; this third branch slightly and gradually curved.

Hind Wings broadly subovate. Apical margin rounded, and slightly scalloped. Precostal vein slightly curved outwards at its extremity. Postcostal vein branching at about the distance of a line from its base. Discoidal cell closed by a slender disco-cellular vein, united to the median vein close to the origin of the third branch. Disc of the wing generally furnished with a tuft of hairs near the anal margin in the male.

Fore Legs of the male very short, and very densely clothed with woolly hairs; the three divisions being of nearly equal length. The tarsus exarticulate, and destitute of unguis. *Fore Legs* of the female longer than those of the male, and more slender, scaly. The tibia slender at the base. Tarsus as long as the tibia, compressed, gradually dilated, and obliquely truncate at the tip, where it is armed with short spines, indicating the articulations.

Four Hind Legs robust, scaly, the intermediate pair being longer than the posterior. Tibia shorter than the femur, with a patch of plush at the base beneath, and a double row of short spines. Tibial spurs short. Tarsi also with several rows of short spines. Ungues very much curved.

ABDOMEN small, more or less conical.

This is a very well marked genus of butterflies of large size, remarkable for the rich metallic spots on the black ground of the wings, and easily distinguished from *Agrias* (to which it is nearly allied, especially in the arrangement of the veins of the wings) by the falcate form of the fore wings, and the much more uniform colouring and marking of the wings beneath, which, in some of the species, remind us of the typical *Nymphalides* (*Charaxes Boisduval*). The very minute and densely woolly fore legs of the males in this genus are also worthy of remark.

We are unacquainted with the transformations of the species, which are natives of the hottest parts of South America, but we are indebted to M. Lacordaire for the following note of their habits:—

“Le plus grand nombre n’habite que dans les forêts, et ne se rapproche qu’accidentellement des plantations. C’est surtout parmi elles qu’on peut juger de la rapidité du vol par la grandeur du corselet et la solidité des ailes. Les espèces où ces organes offrent au plus haut degré toutes les conditions réunies pour un vol puissant, sont les *N. Amphimachus*, *Demophon*, *Orion*, etc. Il est tel que l’œil peut à peine les suivre; elles se posent brusquement sur le tronc des arbres, ferment leurs ailes et restent immobiles. Dans cet état elles se laissent prendre avec la main; ou, si elles ont été effrayées, elles disparaissent et reviennent un instant après à la même place. On les trouve ordinairement sur les habitations, et sur les mêmes arbres autour desquels volent les *Peridromia*.”*

* Annales de la Soc. Entomol. de France, 1833, p. 393.

PREPONA.

1. PREPONA DEMOPHON.

Papilio Demophon Linn. *Syst. Nat.* ii. p. 753. n. 47.;
Clerck, Icones, t. 29. f. 3, 4.; *Fabricius, Ent. Syst.* iii.
 pt. 1. p. 85. n. 265.; *Jones, Icones*, v. t. 56.
Nymphalis Demophon Godart, *Enc. M.* ix. p. 407. n. 189.;
Lucas, Hist. Nat. Lep. Exot. pl. 73. f. 1.
Morpho Demophæna Hübner, *Verz. bek. Sch.* p. 49. n. 455.
Papilio Sisyphus Cramer, pl. 158. C.
Morpho Sisyphæ Hübner, *Verz. bek. Sch.* p. 49. n. 456.
Potamis superba Thalpius Hübner, *Samml. exot. Sch.*
 Band i. pl. —.

Brazil, Guiana.

B. M.

2. PREPONA DEMODICE.

Nymphalis Demodice Godart, *Enc. M.* ix. p. 408. n. 193.
Prepona Demodice Boisduval, *Hist. Nat. Lep.* pl. 7. f. 13.;
Lucas, Hist. Nat. Lep. Exot. pl. 73. f. 2. (*Nymphalis*
D.)
Papilio Demophon fem. Linnæus, *Cram.* pl. 158. E.
Potamis superba Laertes Hübner, *Samml. exot. Sch.*
 Band i. pl. —.

Brazil, Guiana, West coast of South America.

B. M.

3. PREPONA AMPHIMACHUS.

Papilio Amphimachus Fabricius, *Ent. Syst.* iii. pt. 1. p.
 37. n. 110.
Nymphalis Amphimachus Godart, *Enc. M.* ix. p. 408.
 n. 192.; *Boisduval in Cuv. Règne An.* ed. Crochard,
Ins. pl. 139. bis f. 2.
Papilio Meander Cramer, pl. 12. f. A. B.
Morpho Amphimache Hübner, *Verz. bek. Sch.* p. 49. n.
 457.; *Hübner, Samml. exot. Sch.* Band ii. pl. —.

Brazil, Guiana.

B. M.

4. PREPONA LYCOMEDES.

Papilio Licomedes Cramer, pl. 158. D.

Nymphalis Lycomedes Godart, *Enc. M.* ix. p. 408. n.
 191.

Morpho Amphimache var. *Hübner, Verz.* p. 49. n. 457.
 Guiana.

5. PREPONA AMPHITOE.

Nymphalis Amphitoe Godart, *Enc. M.* ix. p. 407. n. 190.
Papilio Amphimachus Sulzer, *Gesch.* pl. 14. f. 2, 3. (but
 not of Fabricius.)
Morpho Antimache Hübner, *Verz. bek. Sch.* p. 49. n.
 458.

Potamis superba Demophoon Hübner, *Samml. exot. Sch.*
 Band i. pl. —.

South America.

6. PREPONA CHALCIOPE.

Morpho Chalciope Hübner, *Samml. exot. Sch.* Band ii.
 pl. —.

Cayenne.

7. PREPONA DEMOPHILE Boisduval MS.

Cayenne.

8. PREPONA DEIPHILE.

Nymphalis Deiphile Godart, *Enc. M.* ix. p. 408. n. 194.
Prepona Deiphile Doubleday, *Westw. & Hewit. Gen. Diurn.*
Lep. pl. 47. f. 3.
 Interior of Brazil.

9. PREPONA CHROMUS.

Prepona Chromus Guérin, *Icon. du Règne An. Ins.* texte,
 p. 478.
Prepona Hercules Klug MS.; *Doubleday, Westw. &*
Hewitson, Gen. Diurn. Lep. pl. 47. f. 2.

Colombia, Bolivia.

B. M.

10. PREPONA PHERIDAMAS.

Papilio Pheridamas Cramer, *Pap.* pl. 158. A. B.
 Surinam

Genus LXXI. PANDORA.

PANDORA Boisduval MS.

BODY robust; wings elongate-triangular, varied above with black and metallic green colours; head maculated.

HEAD large, nearly as wide as the thorax, with a slight frontal tuft, and with four minute white dots on the crown.

Eyes very prominent, naked.

Labial Palpi elongate, porrected obliquely to above the middle of the eyes; the terminal joint horizontal, and reaching forwards to twice the length of the head; black, with a white line beneath; finely scaly, except at the base beneath and the upper side of the second joint beyond the middle, which are clothed with short hairs. Terminal joint elongate-conic.

Antennæ nearly straight, long, slender, about five eighths of the length of the fore wings; terminated by a slight club, occupying about one fifth of the length of the antennæ, and which is gradually formed, the tip being bent a little outwards, finely grooved beneath.

THORAX robust, clothed with very fine short hair; collar as wide as the eyes; wings dark metallic-coloured at the base, with numerous black marks, and with a broad brilliant metallic fascia beyond the middle.

Fore Wings elongate-triangular. Fore margin not strongly arched; apical angle quite rounded. Apical margin deeply emarginate, entire, five eighths of the length of the fore margin. Inner margin nearly straight, two thirds of the length of the fore one. Discoidal cell closed, extending to two fifths of the length of the wing. Postcostal vein emitting the first and second branch before the anterior extremity of the discoidal cell, the second being quite close to it; the third branch arising about two thirds, and the fourth about three fourths, of the length of the wing. Upper disco-cellular vein almost obliterated; middle disco-cellular short, curved; lower disco-cellular also curved, and slightly oblique, uniting with the median vein at the origin of its third branch (which is not deeply arched), and thus closing the discoidal cell.

Hind Wings rather triangular. Anterior margin nearly straight, except at the rounded base. Outer margin

entire, rounded. Precostal vein slightly forked at the tip. Postcostal branching at about two sevenths of the length of the wing from the base, and emitting the upper disco-cellular (which forms the slightly curved base of the discoidal vein) at a little distance beyond the branch; lower disco-cellular arising at about the same distance, very slender and oblique, uniting with the median vein at the base of its third branch, and closing the discoidal cell.

Fore Legs of the male rather elongate, depressed, clothed with rather short loose hairs at the sides and beneath.

Tarsi nearly equal to the tibia in length, exarticulate, and destitute of unguis.

Middle Legs of the male very long, scaly. Femur robust, slightly curved, rather longer than the tibia. Tibiæ rather compressed near the base, with a patch of plush near the base beneath; under side with a double row of very minute spines. Spurs very short. Tarsi scaly, equal in length to the tibia, very slightly spined beneath. Unguis slender, curved. Paronychial with its upper division very slender and curved.

Hind Legs of the male moderately long.

ABDOMEN not very robust, and rather elongate.

The extremely rare and beautiful insect which forms the type of the present genus has been kindly forwarded to us, for illustration and description in the present work, by M. Boisduval. It is chiefly on account of the metallic colouring of its upper side, and the still more splendid appearance of its under surface (the hind wings being entirely rich crimson), as well as of the closed condition of the discoidal cell in all the wings, and the somewhat falcated tips of the fore wings, that I have placed it in the present situation; the arrangement of the branches of the postcostal vein of the fore wings, however, more nearly resembles that of *Agrias* than *Prepona*, differing also in this respect from *Aganisthos*.

The ground colour of the fore wings beneath is black with a blue gloss, a broad white oblique bar running from the costa (beyond the middle) to the middle of the apical margin; the discoidal cell is marked by several transverse patches of blue and scarlet edged with black, and the body as well as the whole of the hind wings is crimson, the latter with a few slightly indicated blackish spots, especially a submarginal row of transverse ones.

We believe the specimen figured to be unique.

PANDORA.

1. *PANDORA PROLA* Boisduval MS.; Doubl. Westw. & Hewitson, *Gen. Diurn. Lep.* pl. XLIII. f. 5.
Columbia (Mt. Tolymna).

Genus LXXII. AGANISTHOS.

AGANISTHOS *Boisduval, Blanchard, E. Doubleday.*

HISTORIS p. *Hübner.*

NYMPHALIS *Godt.*

BODY very robust; wings above not ornamented with metallic spots; fore wings strongly falcate at the tip.

HEAD moderately broad, woolly, scarcely tufted in front.

Eyes large, naked.

Labial Palpi obliquely porrected, forming together a short conical front, the tips elevated above the level of the eyes, with a slight division between them. The upper side of the middle joint beyond the middle thickly hairy, and applied to the face; terminal joint conical.

Antennæ scarcely half the length of the body, slender; terminated by a slender gradually formed but distinct club, occupying about one fourth of the length of the antennæ, very delicately keeled beneath.

THORAX very robust, oblong, truncated behind, woolly, hind part hairy.

Fore Wings large. The anterior margin much arched; apical angle obtuse. Apical margin two thirds the length of the anterior, entire, but very deeply emarginate at a short distance below the apex, giving a strongly falcate appearance to the extremity of the wing. Inner margin nearly straight, and about the same length as the apical margin. Costal vein strong. Postcostal vein with the first and second branches arising before the extremity of the discoidal cell; third branch arising beyond the cell at a little distance before the middle of the wing, running for some distance close to the succeeding portion of the postcostal, but then running close to the costa, and extending to the tip of the wing at the distance of three fourths of the wing from the base. The postcostal vein is obliquely deflexed, throwing off the fourth branch at about four fifths of the length of the wing; the terminal portion of the vein running to the angle preceding the deep emargination. Upper disco-cellular obsolete; middle disco-cellular very short, arising at about two fifths of the length of the wing from the base, straight, directed obliquely towards the base of the wing, throwing off a very short spur into

the discoidal cell, which is not closed, the lower disco-cellular vein being obsolete; third branch of the median vein regularly arched.

Hind Wings subtriangular. The costal margin rounded. Apical margin entire, slightly angulated at the extremity of the third branch of the median vein. Anal groove very large, with the anal angle acute. Pre-costal vein erect, curved outwardly at the extremity. Discoidal cell open, the disco-cellular vein being obsolete.

Fore Legs of the male moderately long, pectoral, not very woolly, and but slightly feathered. Tarsus not more than half the length of the tibia, exarticulate, and destitute of claws. *Fore Legs* of the female very slender; the femur and tibia of equal length, the former finely hairy beneath. Tarsus two thirds of the length of the tibia, slender, scaly; the tip rather compressed, oblique, and armed with three pairs of short spines near the tip, indicating the intermediate joints.

Four Hind Legs moderately long and robust, scaly, the intermediate pair longer than the posterior; similar in structure to those of *Prepona*, *Smyrna*, &c., but with the spines of the tibiæ and tarsi stronger.

ABDOMEN small, conical.

The type of this genus is remarkable for the extraordinary robustness of the body, agreeing in this respect, as well as in its habits, with *Prepona*, but destitute of the metallic markings of the latter genus. The wings are also more strongly falcate, and the veins arranged nearly as in *Pandora*, except that the discoidal cell is open in all the wings. The under side of the wings is richly marked with shades of dark orange and brown, the basal half of the wing with more decided fasciæ, divided by slender black lines, the outermost of which is elegantly glossed with purple, and the submarginal portion of the wing powdered with white scales, as in *Siderone*.

We are only acquainted with a single species belonging to the genus.

AGANISTHOS.

1. AGAN. ORION.

Papilio Orion Fabricius, Syst. Ent. (1775) p. 485. n. 185., Ent. Syst. iii. pt. 1. p. 55. n. 170.; Godart, Enc. M. ix. p. 368. n. 62.

Aganisthos Orion Boisduval & Leconte, Icon. Lep. de l'Am. Sept. t. 52.; Lucas, Hist. Nat. Lep. exot. pl. 66.; Boisduval, Sp. Gen. Lep. pl. 8. f. 1.; Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 46. f. 1.

Papilio Odus Fabricius, Syst. Ent. (1775) p. 457. n. 60.;

Sulzer, Hist. Ins. t. 13. f. 2.

Historis Odia Hübner, Verz. bek. Sch. n. 306.

Papilio Danae Cramer, pl. 84. f. A.B.

Brazil, Guyaquil, &c.

B.M.

Genus LXXIII. APATURA.

APATURA *Fabricius.*

APATURA and CHLORIPPE *Boisduval MS., E. Doubleday.*

CATARGYRIA and DOXOCOPA *Hübner.*

NYMPHALIS *Blanchard.*

NYMPHALIS *p. Godt.*

BODY robust; wings of the males generally with a splendid purple gloss, the anterior emarginate in the middle of the apical margin.

HEAD of moderate size, larger in the males than in the females, hairy, slightly tufted in front.

Eyes prominent, naked.

Antennæ about equal to three fifths of the length of the fore wings, nearly straight; terminated by a rather strong elongate-ovate club, compressed and delicately keeled along the inside.

Maxillæ long and spiral.

Labial Palpi porrected obliquely, the tip rising nearly to the level of the top of the eyes. Inner surfaces parallel, nearly united together, so as to form a conical beak nearly as long as the head, thickly clothed with short scales; the base beneath, the inner surface of the middle joint and the terminal half of the upper surface, furnished with elongated hairs; the basal joint very short; second joint very long, slender, and curved; the third not longer than the basal joint, elongate-conic, pointed at the tip.

THORAX robust, subovate, very woolly in front and behind.

Fore Wings elongate-trigonal. Anterior margin moderately arched; apical angle subtruncate. Apical margin nearly more than two thirds of the length of the anterior, slightly scalloped, and more or less emarginate in the middle. Inner margin nearly straight, a little longer than the apical one. Veins very strong. The costal one extending to the length of two thirds of the costa from the base. Postcostal vein with the first branch arising a little before the anterior extremity of the discoidal cell; second branch arising at one third of the length of the wing, just before or exactly at the extremity of the cell; third branch arising just beyond the

middle of the wing, and extending to the apical angle; fourth branch arising at four fifths of the length of the wing. Upper disco-cellular vein obsolete; middle disco-cellular arising at the anterior extremity of the discoidal cell, at the distance of one third of the length of the wing from the base, very short, and forming the curved branch of the lower discoidal vein; lower disco-cellular vein obsolete, so that the discoidal cell is open.

Hind Wings triangular-ovate; the apical angle more or less elongated. Outer margin scalloped. Inner margin deeply grooved to receive the abdomen, with a deep sinus between the body and the anal angle. Precoastal vein strongly curved, its extremity directed outwards from the body. Postcoastal vein branched at a short distance from its base. Discoidal cell not closed, the outer disco-cellular vein being obsolete.

Fore Legs of the male very short and slender, clothed with delicate white hairs. Tibia shorter than the femur. Tarsus about two thirds of the length of the tibia, very slender, and, when denuded of its hairs, four-jointed; the joints not indicated by short spines, and the apical joint very minute, simple, and destitute of apical claws. *Fore Legs* of the female very slender and scaly. Femur within clothed with short white flossy hairs. Tarsus two thirds of the length of the tibia, nearly cylindrical, suboblique at the tip, and articulated, with short spines beneath, indicating the joints.

Four Hind Legs moderately long, scaly. Tibiæ and tarsi finely spined beneath. Tibia of the middle legs shorter than the femora; those of the hind legs equal to them in length. Tibial spurs short. Claws, paronychiae, and pulvillus of moderate size.

ABDOMEN small, elongate-conic in the males; more robust in the females.

CATERPILLAR naked, gradually attenuated behind; the head armed with two spines, and the tail with two obtuse points.

CHRYSLIS compressed at the sides; the back carinated, and the head bifid.

The butterflies belonging to the present genus are some of the most beautiful of the insect tribes; their wings not only being elegantly varied in their markings, but those of the males of the majority of the species being splendidly glossed with purple or blue, varying in the intensity of the shade. In most of the species, also, the hind wings are marked with an ocellus on the under side, near the anal angle, in the space between the first and second branches of the median vein.

The species here introduced into this genus present some modifications of structure which require notice. Regarding the two European species as the types of the genus, the South American species differ in having a more robust body, shorter fore wings, more elongated hind wings, and longer antennæ. These form the genus *Chlorippe* of Boisduval; but I can find no good structural character to separate them from the European species. The male of *A. Vacuna* has the tibia and tarsus of the fore leg dilated, the latter with very indistinct traces of articulation, and some of the Brazilian species have the under surface of the wings splendidly glossed with silver; these form Hübner's genus *Catargyria*.

East India possesses several beautiful species, one of which, *A. Namouna*, equals our British species in the splendid gloss on its wings. Another hitherto undescribed East Indian species, a native of Assam, for which I am indebted to Major F. Jenkins (*A. Parisatis* *W.*), is at once distinguished by its small size, and by the uniform jet-black colour of the upper surface of its wings; its under side being varied with rich red-brown and chestnut, and with a slight whitish macular fascia across the middle of the wings, and a minute eye near the anal angle. The female is dull fulvous; both surfaces with markings nearly similar to those of the under side of the male, and with a curved row of small white dots near the apex of the fore wings.

In the rich collections of the East India House and British Museum, there are females of two or three other species closely allied to the one last above mentioned.

I have added to this genus the *Limenitis dichroa* of Kollar, from Northern India, which, although destitute of the purple gloss in the males, has the rich yellow markings of the wings arranged nearly as in *A. Iliæ*. The palpi are, however, considerably more elongated, and the head maculated with white. This insect, and another still finer and closely allied from India, yet undescribed, form the types of Boisduval's MS. genus *Castalia*.

I am more doubtful as to the propriety of introducing, even at the end of the genus, another new species from India (*A. Morgiana* *W.*), somewhat agreeing in its markings with *A. dichroa*, but having the discoidal cell closed in all the wings by a very delicate lower disco-cellular vein; the palpi and antennæ are, however, those of the present genus; the hind wings have the disc of a uniform orange yellow colour, but exhibiting a very remarkable silky texture. It is possible that when the larva of this species is known, it may prove more nearly allied to the genus *Vanessa*.

The Larva of the Purple Emperor, as our British species, *A. Iris*, is appropriately named, feeds upon the broad-leaved willow, is thickest in the middle of the body, with the head furnished with two erect horns; the body attenuated behind, and terminated by a bifid point*; it is delicate green, and finely shagreened with slender, oblique, pale yellow lines at the sides. A very interesting account of the transformations and habits of this insect, written by Pallas, and presented to the old Aurelian Society, but which had remained unpublished, was found by me amongst the papers of Mr. Drury. I communicated this memoir to the Entomological Society of London, and it is published in the second volume of the *Transactions* of that society. From this we learn that the eggs are of a curious and elegant shape, and are deposited on the highest branches of the willow and oak; they are at first of a bright greenish yellow, but subsequently acquire a dark brown circle round the top, where afterwards the head of the caterpillar is formed and seen through the shell, which is eaten by the caterpillar as soon as hatched. It also devours its own cast skin after its different moultings. The Perfect Insect is remarkable for the elegance of its mode of flight, which Boisduval enthusiastically terms "*nobilis, velificans*." It is in the month of June that it appears in the winged state, fixing its throne, as Mr. Haworth remarked, on the summit of a lofty oak, from the utmost sprigs of which, on sunny days, it performs its aerial excursions, ascending to a very great elevation, and sometimes mounting higher even than the eye can follow, especially if it happens to quarrel with another Emperor, the monarch of some neighbouring oak.

* On account of this formation of the larva Dr. Horsfield has separated *Apatura* from the other *Nymphalidæ*, and given it as a normal genus of his *Thysanuriform* stirps, including *Melanitis* and *Hipparchia*. I cannot, however, regard the characters afforded by the preparatory states, in this instance, as overbalancing the more evident affinity of the perfect insect to the typical *Nymphalidæ*.

The female is rarely seen on the wing, which is attributed by Mr. Haworth to its "being destitute of a certain spiral *socket*" near the base of its upper wings, "which receives and works a strong elastic *spring* arising from the base of the under wings," and which, he states, is possessed by the males. The structure here described is that possessed by the males of many of the Nocturnal Lepidoptera and Sphingidæ, but neither the Purple Emperor nor any other Diurnal Lepidopterous insect exhibits such a peculiarity. Mr. E. Doubleday, indeed, in his description of the Plate of Details in this work, marked A, asserts that this spring or bristle is to be found in the vein at the base of the wings of butterflies which we have in this work termed the precostal vein; but, on a careful examination of its structure in various large moths and hawk-moths, I cannot adopt such a conclusion: it in fact appears to me to be a horny bristle attached to the margin of the wing, and in no way connected with the system of wing-veins, as is the case with the precostal vein in butterflies.

Messrs. Boisduval and Leconte have published figures and descriptions of the transformations of two North American species of this genus, namely, *Ap. Clyton* and *Celtis*. The Caterpillar of *A. Clyton* feeds on various species of *Prunus*, and other drupaceous tree it is green, with four longitudinal lines of greenish yellow. It is considerably more elongated than the caterpillar of *A. Iris*. The head is greenish yellow, with two black spots and two short, branching, yellowish horns, and with the two points of the tail a little elevated. The Chrysalis is green, with the wing-cases and some bars on the back greenish yellow.

The Caterpillar of *A. Celtis* is very similar in form to that of *A. Clyton*; it feeds on the *Celtis occidentalis*, and is green or greenish yellow, with the sides whitish, and a stripe along the back greenish yellow, edged with a line of obscure green on each side. The sides white, with a dark lateral line; the head green, with two small bifid spines; and the anal points slightly recurved. The Chrysalis is greenish yellow, with the head bifid.

APATURA.

1. APAT. IRIS.

- Papilio Iris* *Linnaeus*, *Syst. Nat.* ii. 775.; *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 110. n. 339.; *Hübner*, *Eur. Schmett. Pap.* f. 117, 118. 504.; *Levin*, *Brit. Butt.* t. 16. f. 1, 2.
Nymphalis Iris *Godart*, *Enc. M.* ix. p. 411. n. 200., *Lép. de France*, i. t. 6. f. 1.
Apatura Iris *Ochsenheimer*, *Schmett. v. Europ.* iv. p. 19.; *Steph. Ill. Haust.* vi. p. 50.; *Curtis*, *Ill. Brit. Ent. pl.* 338.; *Westwood & Humph. Brit. Butt.* pl. 16. f. 1—5.; *Boisduval*, *Ind. Meth.* n. 181.
Doxocopa Iris *Hübner*, *Verz. bek. Schm.* n. 460.
 Var. *Papilio Beroe* *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 111. n. 341.; *Herbst*.
 Var. *Pap. Iole* *Wiener. Verzeichniss*, 172—3.; *Hübner*.
 Northern parts of Europe, Russia. B. M.

2. APAT. ILIA.

- Papilio Ilia* *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 110. n. 340.; *Hübner*, *Eur. Schmett. Pap.* f. 115, 116.; *Godart*, *Enc. M.* ix. p. 412. n. 201.
Apatura Ilia *Ochsenheimer*, *Schmett. von Europa*, iv. p. 19.; *Boisduval*, *Ind. Meth.* n. 182.
Doxocopa Ilia *Hübner*, *Verz. bek. Schm.* n. 461.
Papilio Iris minor *Esper*, *Schmett.* t. 71. cont. 21. f. 2, 3.
Papilio Clytie *Wien. Verz.* p. 321.; *Hübner*.
Papilio Iris lutea *Borkhausen*.
Papilio Iris rubescens *Rossi*.
Apatura Iris metis *Kindermann*.
Doxocopa Astasia *Hübner*, *Verz. bek. Schm.* n. 463., *Schmett. Pap.* 812.
 Continent of Europe, Russia, Smyrna. B. M.

3. APAT. CLYTON.

- Apatura Clyton* *Boisduval & Leconte*, *Icon. Lép. & Chen. de l'Amér. Sept.* p. 208. t. 56.; *E. Doubleday*, *List Lep. Brit. Mus.* p. 108.
 Ohio and Southern United States. B. M.

4. APAT. CELTIS.

- Apatura Celtis* *Boisduval & Leconte*, *Icon. Lép. & Chen. de l'Amér. Sept.* p. 210. pl. 57.
 Georgia and Southern United States. B. M.

5. APAT. ERMINEA.

- Papilio Erminea* *Cramer*, *Pap.* pl. 196. A. B., 241. A. B.; *Godart*, *Enc. M.* ix. p. 410. n. 199. (*Nymphalis* Er.); *Hübner*, *Verz. bek. Schm.* n. 459. (*Doxocopa* Er.); *Doubl. Westw. & Hewitson*, *Gen. Diurn. Lep.* pl. 45. f. 1.
 Amboyne.

6. APAT. CYANE.

- Nymphalis Cyane* *Latreille* in *Humboldt & Bonpl. Obs. Zool.* ii. p. 82. pl. 36. f. 3, 4.
Nymphalis Cyanippe *Godart*, *Enc. M.* ix. p. 414. n. 202.
 Peru, Colombia.

7. APAT. PAVONII.

- Nymphalis Pavon.* *Latreille* in *Humboldt & Bonpland. Obs. Zool.* i. 197. pl. 18. f. 3, 4.; *Godart*, *Enc. M.* ix. p. 376. n. 89.
 Peru, Colombia.

8. APAT. THOE.

- Nymphalis Thoe* *Godart*, *Enc. M.* ix. p. 376. n. 88.
 America, Brazil.

9. APAT. AGATHINA.

- Papilio Agathina* *Cramer*, *Pap.* t. 167. f. E. F.; *Doubleday*, *List Lep. Brit. Mus.* p. 168. (*Chlorippe* Ag.)
Doxocopa Agathina *Hübner*, *Zutr.* pt. iv. p. 36. f. 765, 766.
Nymphalis Agathis *Godart*, *Enc. M.* ix. p. 377. n. 91.
 Brazil, Surinam. B. M.

10. APAT. VACUNA.

- Nymphalis Vacuna* *Godart*, *Enc. M.* ix. p. 377. n. 90.; *Doubleday*, *Westw. & Hewits. Gen. Diurn. Lep.* pl. 45. f. 3. (*Apat. V.*)
 ♀ *Doxocopa Marse* *Hübner*, *Zutr.* pt. iv. p. 10. f. 617, 618.
 ♀ *Heterochroa Marse* *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* p. 278. n. 6.*
 Brazil.

11. APAT. LAURA.

- Papilio Laura* *Drury*, *Ill.* vol. ii. app. pl. 17. f. 5, 6.
Papilio (*Nymphalis*) *Laura* *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 134. n. 415.; *Godart*, *Enc. M.* ix. p. 376. n. 87. (*Nymphalis* La.); *Hübner*, *Samml. exot. Schm.* Band ii. pl. —. (*Catargyria* L.); *Doubleday*, *Cat. Lep. Brit. Mus.* p. 108. (*Chlorippe* L.); *Doubl. Westw. & Hewitson*, *Gen. Diurn. Lep.* pl. 42. f. 5. (*Apat.* L.).
 Brazil, West Indies, West Coast of South America. B. M.

12. APAT. LUCASII.

- Apatura Lucasii* *E. Doubleday MS.*; *Doubl. Westw. & Hewitson*, *Gen. Diurn. Lep.* pl. 45. f. 2.
 —?

13. APAT. LAURENTIA.

- Nymphalis Laurentia* *Godart*, *Enc. M.* ix. p. 376. n. 86.; *Doubleday*, *Cat. Lep. Brit. Mus.* p. 108. (*Chlorippe* Laurentia).
Catargyria Scraphina *Hübner*, *Samml. exot. Schm.* Band ii. pl. —.
 Brazil. B. M.

14. APAT. ARACYNTHIA.

- Papilio Aracynthia* *Dalman*, *Insect. nov. sp.* p. 41. n. 8.
 —?

15. APAT. ZUNILDA.

- Nymphalis Zunilda* *Godart*, *Enc. M.* ix. p. 377. n. 92.; *Doubleday*, *Cat. Lep. Brit. Mus.* p. 108. (*Chlorippe* Z.).
 Brazil.

* Being now acquainted with the male of this insect, I find it belongs to the genus *Apatura*, and not to *Heterochroa*, as indicated in p. 278. n. 6.

- | | |
|---|---|
| <p>16. APAT. DRURII.
Catargyria Drurii <i>Hübner, Samml. exot. Schm. Band ii.</i>
pl. —.
Brazil.</p> <p>17. APAT. IDYJA.
Doxocopa Idyja <i>Hübner, Samml. exot. Schm. Band ii.</i>
pl. —.
Cuba, Peru.</p> <p>18. APAT. NAMOUNA.
Apatura Namouna <i>E. Doubleday, Ann. Nat. Hist. xvi.</i>
p. 178.
Apatura Ambica <i>Kollar in Hugel's Reise durch Kaschmir,</i>
ii. p. 431. pl. 8. f. 3, 4.
Silhet, Mussooree, Himalayas. B. M.</p> | <p>19. APAT. OSTERIA <i>Boisduv. MS. nov. sp.*</i>
Singapore, Java. B. M.</p> <p>20. APAT. PARISATIS <i>Westw. nov. sp.†</i>
Assam. B. M., &c.</p> <p>21. APAT. DICHROA.
Limenitis dichroa <i>Kollar in Hugel's Reise durch Kaschmir,</i>
ii. p. 429. pl. viii. f. 1, 2.
Castalia Nyctis <i>Boisduval MS.</i>
Northern India, Assam, Himalayas. B. M.</p> <p>22. APAT. ? MORGIANA <i>Westw. nov. sp.‡</i>
Southern India. Coll. East Ind. House and B. M.</p> |
|---|---|

Genus LXXIV. PYCINA.

PYCINA *Boisduval MS.*

BODY very robust, densely woolly; fore wings angulated below the apex; hind wings thickly ornamented beneath with irregular undulating streaks and clouds, and with a submarginal row of five beautiful ocelli.

HEAD transverse, clothed with short hairs, not tufted in front.

Eyes large, densely hairy.

Labial Palpi very small, not extending higher than the level of the middle of the eyes, scaly; the tip of the middle joint and the minute conical third joint alone being visible from above; the latter rather obliquely inserted.

Antennæ straight, rather more than half the length of the fore wings, and nearly as long as the entire body; rather slender; terminated by a well defined club, occupying about one fifth of the antennæ, very elongate-ovate, not compressed, with a delicate double keel on the inside.

THORAX much broader than the head, densely woolly, oblong, truncated behind.

Fore Wings elongate-trigonal. Fore margin moderately arched. Apex truncate. Apical margin angulated below the apex, deeply emarginate below the angle, about three fifths of the length of the anterior margin. Inner margin about as long as the apical. Costal vein extending about two thirds of the length of the costa. The first and second branches of the postcostal vein arising before the anterior extremity of the discoidal cell, the second being close to its extremity; third branch arising at about half the length of the wing, and extending to the tip; fourth branch arising at about three fourths of the length of the wing. Upper disco-cellular arising at three sevenths of the length of the wing from the base, very short; middle disco-cellular much longer, and very much curved towards the base of the wing; outer disco-cellular rather longer than the middle one, very oblique, and scarcely curved, uniting with the third branch of the median vein at a little distance from its origin, closing the discoidal cell about the middle of the wing, in an acute point.

Hind Wings subtriangular. Costal margin arched at the base, deeply emarginate in the middle; outer angle dilated and rounded. Apical margin slightly scalloped. Inner margin, and disc of the wing towards the body, very thickly woolly. Precostal vein with its tip slightly curved towards the body. Discoidal cell closed by a slender disco-cellular vein, uniting with the third branch of the median vein almost at its base.

Fore Legs of the male pectoral, but longer than in the neighbouring genera, being nearly half an inch long. Femur nearly straight, with a row of silken hairs on the inside, set on at right angles. Tibia and tarsus forming a very thick brush, more than one eighth of an inch in width. Tibia as long as the femur. Tarsus two thirds of the length of the tibia.

* *Apat. alis anticis elongatis subfalcatis, posticis subtriangularibus; omnibus supra fusco-nigris fascia communi alba margaritacea e medio anticarum ad medium marginis analis posticarum, sensim dilatata; alis infra margaritaceis fascia media communi pallidiori; striga fusca antice marginata, singula ocello versus angulum analem pupilla nigra iride cæruleo, circulo pallide luteo circum cincto. Expans. alar. antic. unc. 2½.*

† *Mas alis corporeque supra omnino atris, puncto minimo albo versus apicem alarum anticarum excepto; alis infra ferrugineis fusco-nebulosis punctis duobus nigris parvis in area discoidali, maculaque auriformi ante medium, striga irregulari submedia alteraque subapicali griseo-cæruleis ocelloque parvo versus angulum analem. Fœm. alis supra obscure fulvis, area discoidali omnium punctis duobus maculaque nigris; fascia media angulata obscura, pone medium fusco-nebulosis serieque ocellorum parvorum cæcorum submarginali; subtus ut in mare, at multo pallidior. Exp. alar. antic. unc. 2.*

‡ *Mas alis anticis nigro-fuscis fascia obliqua irregulari media alteraque pone medium aurantiis punctisque duobus subapicalibus albis; posticis sericeoaurantiis basi fimbriaque lata apicali fuscis; angulo externo strigaque undata anguli analis aurantiis; alis subtus pallidioribus, luteo-albidis basi apiceque pallide murinis griseo plus minusve pulverosis. Fœmina similiter maculata attamen colore albo nec aurantio, posticis etiam pone medium lilacino irroratis. Exp. unc. 2¾.*

Four Hind Legs elongated, scaly, and robust. Femur rather curved. Tibia straight. Intermediate tibia with an elongated patch of plush-like down on the base beneath; the remainder of the limb thickly armed with short acute spines; those on the upper surface placed irregularly, but those at the sides and beneath in rows. Tibial spurs short. Tarsi nearly equal to the tibia in length, as well as in thickness, and similarly armed all over with short, strong, acute spines. Ungues long, rather slender, very acute, and curved. Paronychial with the outer division nearly as long the unguis, but much more slender, curved; inner division shorter, and equally slender.

ABDOMEN small, conical.

TRANSFORMATIONS unknown.

Although at first sight not appearing to possess any remarkable peculiarity of structure, the type of the present genus, on examination, is found to exhibit several remarkable characters, which not only require the establishment of a genus for its reception, but even render very doubtful the situation in the present family to which it ought to be assigned. Of these characters, the very minute palpi, hairy eyes, form of the outline of the fore wings, and especially the form of the costal outline of the hind wings, and the very beautiful markings of the latter on the under side (reminding us strongly of the markings of *Pyrameis Atalanta*), accompanied by a row of beautiful eyelets, and the very spiny armature of the hind legs, are the most important. In general respects, the genus is perhaps most nearly allied to *Smyrna* and *Agrias*; and, like the species of these genera, the insect of which the present genus is composed is a native of tropical America (Venezuela). It is impossible, also, to overlook its general resemblance to *Aganisthos*.

PYCINA.

1. PYCINA ZAMBA.

Pycina Zamba Boisduval MS.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 48. f. 3.
Venezuela. B. M.

Genus LXXV. NYMPHALIS.

NYMPHALIS *Latreille, Godt.*

CHARAXES *Ochsenheimer, Boisduval, E. Doubleday, Blanchard.*

IASIUS *Swainson.*

ERIBOEA and TIGRIDIA *p. Hübner, Verz. b. Schm.*

PAPHIA *sect.* Fabricius, Syst. Glossat.*

BODY extremely robust; hind wings generally with one or two tails; under surface of the wings beautifully ornamented with patches and markings of varied colours. Female scarcely differing in appearance from the male, but larger and sometimes with a paler oblique bar on the fore wings.

HEAD moderately large, woolly, not tufted in front.

Eyes very prominent, naked.

Labial Palpi large, porrected obliquely; the tip elevated considerably above the level of the top of the eyes, and extending in front of the head nearly as far as its length; rather apart at the base, but approximating at the tip; thickly scaly. The extremity of the second joint above clothed with short erect hairs, resting upon the face in repose; terminal joint somewhat naked, small, and conical; inside with the scales more hair-like.

Antennæ rather short, not half the length of the fore wings, strong, straight; terminated by a long, gradually formed, but not very robust, fusiform club, slightly attenuated at the extreme tip, where it is obliquely truncate, with a very fine carina on the under side, on each side of which is a very slight longitudinal impression.

THORAX very robust, oblong, thickly clothed with wool, especially on the metathorax.

Fore Wings subtriangular. Fore margin moderately arched; apical angle somewhat acute, but rounded off at its extremity. Apical margin oblique, slightly emarginate, and almost entire, three fourths of the length of the costa. Inner margin straight, about equal in length to the apical margin. Veins very strong. Costal vein not extending to the middle of the costa. Postcostal vein with the first and second branches arising before the anterior extremity of the discoidal cell; third branch arising at a very little distance beyond the cell; fourth branch arising also at a small distance beyond the third, at rather more than the length of two fifths of the wing from the base; elbowed downwards towards the tip of the wing. The upper disco-cellular vein arising at about the length of one third of the wing from the base, very short, transverse; as is also the rather longer middle disco-cellular; the lower disco-cellular still longer, straight, transverse, very slender, and uniting with the third branch of the median vein at some distance from its origin, closing the discoidal cell transversely. Third branch of the median vein gradually arched.

Hind Wings large, somewhat ovate, not ocellated beneath. Costal margin arched. Outer margin more or less dentate, and tailed; the tails being produced at the extremity of the first and third branches of the median vein. Precostal vein oblique; the tip rather suddenly bent outwards. Discoidal cell small and narrow; closed imperfectly by a very fine disco-cellular veinlet, which unites the discoidal vein with the median vein just before its third branch is thrown off.

Fore Legs of the male very minute, scaly, and clothed with fine, silky, rather short black hairs above, and white ones below; the tibia and tarsus being together not, or but little, longer than the femur. The tibia twice the length of the tarsus, which is indistinctly articulated beyond the middle and towards the tip, when denuded of scales. *Fore Legs* of the female half as long again as those of the males, scaly. The femur with a slight row of fine hairs on the inside. Tibia two thirds of the length of the femur. Tarsus about as long as the tibia, compressed, dilated at the tip, which is obliquely rounded off, with several pairs of spines towards the tip on the under side, indicating the articulations; the basal joint being scarcely more than half the length of the tarsus.

Four Hind Legs rather short, very robust, finely scaly. Tibia shorter than the femur, flat beneath. Intermediate tibia with an oblong patch of delicate plush at the base; each side with a row of fine short spines. Tibial spurs short. Tarsi robust, scaly, with four rows of short spines beneath. Ungues moderate. Paronychiae very small; the inner lobe very short; outer lobe acute, curved.

ABDOMEN rather short; nearly ovate in the female.

LARVA without any spines on the body, which is gradually attenuated behind; terminated by a depressed bicuspidated tail. The head armed with four obtuse horns.

CHRYsalis abbreviated, rounded, subconical, scarcely carinated down the back.

The present genus contains an extensive series of some of the finest species of the present family; the majority of which are distinguished by each of the hind wings being furnished with a pair of tails, by the elegant markings of the under surface of the wings, and by the greatly elongated condition of the fourth branch of the postcostal vein of the fore wings, which arises at a short distance beyond the discoidal cell, and which is curiously bent downwards towards the tip of the wings.

The propriety of applying the generic name *Nymphalis* to this group will doubtless be questioned. That Linnaeus, the first author by whom the name was applied, had no decided idea of the contents or characters of the group to which he applied the term is evident, even to the tyro; we should, therefore, as I apprehend, be at liberty to look for the types of the genus when it became more satisfactorily established in the *Encyclopédie Méthodique*. Here it is evident that the present insects, occupying, as they do, the head of the genus, were regarded as its types; and as such I am inclined to consider them, notwithstanding the form of the larva, which approximates so closely to that of *Apatura*, that M. Boisduval has united these two genera into a tribe named *Apaturides*, distinct from the *Nymphalides*, of which he appears to regard *Limenitis Populi* as the type, giving to that insect the generic name of *Nymphalis*.

The following observations on the typical species, *P. Jason* Linn., are extracted from Wilson's *Illustrations of Zoology* (fol. 27.):—"This butterfly is one of the largest, rarest, and most beautiful of the European Diurnal Lepidoptera. Lefebvre de Cérisy has paid considerable attention to the metamorphoses of this fine insect. The Caterpillar, which in its early stage is green, becomes afterwards of a yellowish hue, and its skin is, as it were, shagreened and transversely plaited. Its head is singularly armed with four vertical yellow horns, tipped with red, of which the two intermediate are the longest. A yellow line passes along each side of the body, in the region of the stigmata, and the back is marked with four indistinct orange spots. The true feet are black, the membranous ones green. It feeds on the leaves of the strawberry tree, and never eats except during the night. Its habits are very lethargic. During daylight it remains fixed and motionless on its favourite plant, which it resembles in colour, and thus escapes observation. The Chrysalis is smooth, thick, carinated, and of a coriaceous texture; the colour, pale green. Two broods or flights of the Perfect Insect are produced each year; the first in June, the second in September. The caterpillars of the autumnal brood survive the winter, and are not transformed into chrysalids till the ensuing May. The perfect insects are then produced in about fifteen days. These speedily deposit their eggs, which are hatched in June; and, after three months occupied in the usual transformations, the second flight appears in September, and continues the race in the manner above mentioned. In many parts of France, this butterfly is named the 'Pacha with two tails.' The transformations of this species have also been carefully observed and described by Signor Costa, in the *Fauna del Regno di Napoli*, and by M. Duponchel; the latter in his *Iconographie des Chenilles*, and in a "Notice sur les Particularités que présentent les Changements de Peau de la Chenille du Charaxes Jasius," inserted in the *Annales de la Société Entomologique de France* (tom. vi. 1837). This peculiarity consists in the circumstance of the envelope of the head of the caterpillar, instead of being slit into three parts (as is the general custom with Lepidopterous larvæ on undergoing their moultings), being cast off entire without any alteration either of form or colour, so as in fact to look like the head itself, a minute or two before it disengages itself from the skin of the remainder of the body. This remarkable mode of shedding the covering of the head is effected in the following manner. For three days before moulting, the head, which was previously held in horizontal position, is gradually depressed in front, so as to assume a vertical position, by which means the skin of the back of the neck is slit across; whereupon, by a swelling and retractile movement of the three anterior segments of the body, the remainder of the head is withdrawn from its ancient covering. The new skull is at least three times the size of the old one; at first it is rounded in front, but the horns are rapidly developed; in fact, during the few days preceding the moulting, four small tubercles are observed on the hind part of the first segment, containing the rudiments of the four horns of the new skull. Hence, although apparently the new skull is formed from the first segment alone, independent of the preceding head, M. Duponchel supposes that it is owing to the increased size of the enclosed skull that it is forced backwards into the first segment; the cast head, being in fact hollow, presenting only the envelope of the different organs attached to it. Some specimens of the larvæ, received by M. Duponchel, in the middle of January, from Hyères, underwent the change to the chrysalis state between the middle and end of the following August, and the perfect insects were developed at the end of the following May and beginning of June; which proves that on some occasions, instead of there being two broods in the course of one year, as above stated, it requires a year and three quarters or two years to bring the species to perfection.

November 1, 1850.

The transformations of *N. Athamas* were observed by Dr. Horsfield in Java, and are represented in his work on the Lepidopterous insects of the East India Company's Collection. The Larva is somewhat more elongated than that of *Jason*; the head similarly furnished with four erect horns; the sides of the body above the abdominal legs marked with two oblique pale stripes, and the body is terminated above by two small obtuse points. The Chrysalis (for a specimen of which I am indebted to Dr. Horsfield) is short and very much swollen, especially the abdominal portion, and is destitute of any conical protuberances; the head is very broad, and transversely truncate; the sides of the body, along the inner margin of the cases of the fore wings, are formed into two sharp edges; the body is terminated by a slender horny appendage, armed at the tip with a great number of minute reflexed hooks, enabling the insect to attach itself to the layer of silken thread it had previously spun on the twig, and at the base of this point are several small rounded tubercles.

The Larva of *N. Fabius*, observed by General Hardwicke, as represented in his collection of drawings preserved in the British Museum, is still more elongated, of a green colour above and white below; the head similarly armed to that of the preceding species. The Chrysalis of *N. Bernardus* is represented by R. Templeton, Esq., in the *Transactions of the Entomological Society*, vol. v. pl. 5. fig. 9. page 44. It is more convex than that of *N. Athamas*.

Of the habits of the Perfect Insects we know but little. Their very robust structure, however, at once indicates their powerful mode of flight. Mr. Smeathman, in fact, informed Drury that the African species fly in the heat of the day with amazing rapidity, and seldom descend within eight feet of the ground. They glance from branch to branch with the swiftness of the swallow, turning the head about instantly to the glade or path, and not allowing any person to approach near them, but darting off on the least motion of the body. They, however, soon become more familiar and careless, and are then to be caught upon some particular branch, to which they appear to be more especially attached.

The species are confined to the hottest regions of the Old World and Australia. Tropical Africa appears to be their chief metropolis, although several splendid species occur in the East Indies.

The chief variations which occur in the general form of the species arise from the greater or less development of the caudal appendages of the hind wings. The general appearance of the species is that represented in our Pl. XLVIII. f. 1., *N. Ethalion*, from Port Natal. An aberrant species, *N. Zoolina*, from the same country, is represented in Pl. LIII. f. 1.; of a less robust habit, with the fore wings angulated below the extremity, and the two tails of the hind wings dilated at the tip. *N. Bernardus*, *Nisus*, and some other Eastern species, have the tail at the anal angle of the hind wings obsolete, and the other tail varying in length. *N. Berenice* has the apical margin of the fore wings convex, instead of emarginate, and the hind wings, towards the anal angle, dilated into a broad subdigitated lobe; and *N. Eupale*, *Marica*, and *Mycerina* are entirely destitute of tails. A very remarkable and beautiful new species in the museum of the Jardin des Plantes has the tails well developed, but instead of being straight and parallel they are curved, so that the tips of each pair converge, nearly meeting together. It is a native of the Eastern Archipelago, and has been named in MS. *N. De Hanii*.

NYMPHALIS.

1. NYMPH. JASON.

Papilio Jason *Linnaeus*, *Syst. Nat.* ii. p. 749. n. 26.; *Cramer*, *Pap.* t. 329. f. A. B.; *Westw.* in *Drury*, *Ill.* 2d edit. i. p. 2.

Papilio Jasius *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 61. n. 191.; *Drury*, *Ill.* i. t. 1. f. 1.; *Ochs*, *Schmett. von Eur.* i. 151., iv. 18.; *Godart*, *Enc. M.* ix. p. 350. n. 1. (*Nymphalis J.*); *Boisduval*, *Ind. Meth.* p. 24. n. 180. (*Charaxes Jasius*); *Boisduval*, *Spec. Gen. Lep.* pl. 7. f. 12., pl. 3 A. f. 9.

Papilio Rhea *Hübner*, *Europ. Schm. Pap.* f. 111, 112. 580, 581.

Eriboea Unedonis *Hübner*, *Verz. bek. Schm.* n. 423.

Southern Europe, Asia Minor, Barbary. B. M.

2. NYMPH. EPIJASUS.

Charaxes Epijasus *Boisduval*, *MS.*; *E. Doubl. List. Lep. Brit. Mus. App.* p. 28.; *Feisthamel* in *Annal. Soc. Ent. France*, 1850, p. 257.

Senegal, Cazamanca. B. M.

3. NYMPH. CASTOR.

Papilio Castor *Fabricius*, *Gen. Ins. Mant.* p. 251., *Ent. Syst.* iii. pt. 1. p. 63. n. 196.; *Godart*, *Enc. M.* ix. p. 351. n. 4. (*Nymphalis C.*); *Donovan*, *Nat. Repos.* iv. pl. 16.

Papilio Pollux *Cramer*, *Pap.* t. 37. f. C. D. *Charaxes Pollux* *Feisthamel* in *Annal. Soc. Ent. France*, 1850, p. 255. pl. 9. f. 1.

Papilio Camulus *Drury*, *Ill.* iii. t. 30. f. 1, 2. Sierra Leone, Congo. B. M.

4. NYMPH. POLLUX.

Papilio Pollux *Fabr.* *Ent. Syst.* iii. pt. 1. p. 63. n. 197.; *Godart*, *Enc. M.* ix. pt. 1. p. 352. n. 5.; *Lucas*, *Hist. Nat. Lep. exot.* pl. 62. f. 1. (*Nymphalis P.*).

Papilio Castor *Cramer*, *Pap.* 37. f. E. F. Ashanti, Guinea. B. M.

5. NYMPH. BRUTUS.

Papilio Brutus *Cramer*, *Pap.* t. 241. f. E. F.; *Godart*, *Enc. M.* ix. p. 351. n. 3. (*Nymphalis Br.*).

Ereboea Brutus *Hübner*, *Verz. bek. Schm.* p. 47. n. 422. Sierra Leone, Coast of Guinea. B. M.

6. NYMPH. LUCRETIVS.

Papilio Lucretius *Cramer*, *Pap.* t. 82. f. E. F.; *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 84. n. 261.; *Godart*, *Enc. M.* ix. p. 352. n. 7.

Eriboea Lucretia *Hübner*, *Verz. bek. Schm.* n. 425.

Coast of Guinea. B. M.

7. NYMPH. ETHEOCLES.

Papilio Etheocles *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 64. n. 200.; *Cramer*, *Pap.* pl. 119. f. D. E.; *Godart*, *Enc. M.* ix. p. 355. n. 17. (*Nymphalis Eth.*).

Eriboea Etheoclessa *Hübner*, *Verz. bek. Schm.* n. 431. Coast of Guinea, Sierra Leone.

8. NYMPH. EPHYRA.

Nymphalis Ephyra *Godart*, *Enc. M.* ix. p. 355. n. 18.

Charaxes Ephyra *Feisthamel* in *Annal. Soc. Ent. France*, 1850, p. 258.

West Coast of Africa, Cazamanca.

9. NYMPH. ETESIPE.

Nymphalis Etesipe *Godart*, *Enc. M.* ix. p. 355. n. 19.

Papilio Etheocles *Drury*, *Ill.* iii. pl. 10. (but not of *Fabricius*).

Sierra Leone.

10. NYMPH. ETHETA.

Nymphalis Etheta *Godart*, *Enc. M.* ix. p. 356. n. 20.; *Guérin*, *Icon. R. An. Ins.* p. 477. pl. 78. f. 4.; *Griffith's An. Kingd. Ins. Lep.* pl. 2. f. 4.

West Coast of Africa.

11. NYMPH. TIRIDATES.

Papilio Tiridates *Fabricius*, *Spec. Ins.* ii. p. 11. n. 43., *Ent. Syst.* iii. pt. 1. p. 26. n. 195.; *Cramer*, *Pap.* t. 161. f. A. B.; *Drury*, *Ill.* iii. t. 23. f. 1, 2.; *Donovan*, *Ins. of India*, pl. 23. f. 3.; *Godart*, *Enc. M.* ix. p. 354. n. 14. (*Nymphalis T.*); *Lucas*, *Hist. Nat. Lep. exot.* t. 62. f. 2.; *Boisduval* in *Delegorgue*, *Voy. Afriq.* ii. p. 593. (*Charaxes T.*).

Ashanti (not Java or Amboyna).

B. M.

12. NYMPH. EUDOXUS.
Papilio Eudoxus *Fabricius, Ent. Syst.* iii. pt. 1. p. 65. n. 203.; *Jones, Icones*, v. t. 53.; *Drury, Ill.* iii. pl. 33. f. 1, 2.; *Godart, Enc. M.* ix. p. 352. n. 6.
Sierra Leone.
13. NYMPH. ANTICLEA.
Papilio Anticlea *Drury, Ill.* iii. t. 27. f. 5, 6.; *Godart, Enc. M.* ix. p. 353. n. 9.
Papilio Horatius *Fabricius, Ent. Syst.* iii. pt. 1. f. 64. n. 202.; *Jones, Icones*, v. t. 16. f. 3, 4.; *Godart, Enc. M.* ix. p. 354. n. 13. (Nymphalis H.).
Charaxes Horatius *Feisthamel in Ann. Soc. Ent. France*, 1850, p. 259.
Sierra Leone. B. M.
14. NYMPH. PROTOCLEA.
Charaxes Protoclea *Feisthamel in Annal. Soc. Ent. France*, 1850, p. 260.
Cazamanca, Western tropical Africa.
15. NYMPH. BOUETI.
Charaxes Boueti *Feisthamel in Annal. Soc. Ent. France*, 1850, p. 261.
Gambia.
16. NYMPH. CANDIOPE.
Nymphalis Candiope *Godart, Enc. M.* ix. p. 353. n. 10.
Congo. B. M.
17. NYMPH. IOCASTE.
Charaxes Iocaste *Boisduval MS.; E. Doubl. List. Lep. Brit. Mus.* App. p. 28.
Senegal. B. M.
18. NYMPH. THIESTE.
Papilio Thieste *Stoll, Suppl. Cram.* pl. 32. f. 2. 2B.
Eriboea Thyestessa *Hübner, Verz. bek. Schm.* n. 432.
Nymphalis Thurius *Godart, Enc. M.* ix. pt. 1. p. 354. n. 15.
An N. Xiphares mas?
Caffraria.
19. NYMPH. XIPHARES.
Papilio Xiphares *Fabricius, Ent. Syst.* iii. pt. 1. p. 71. n. 221.; *Cramer, Pap.* t. 377. f. A.B.; *Godart, Enc. M.* ix. p. 357. n. 25.; *Boisduval in Delegorgue, Voy. Afriq.* p. 593.
Cape of Good Hope. B. M.
20. NYMPH. PELIAS.
Papilio Pelias *Cramer, Pap.* pl. 3. f. C.D.; *Godart, Enc. M.* ix. p. 351. n. 2.
Eriboea Pelopia *Hübner, Verz. bek. Schm.* n. 424.
Cape of Good Hope.
21. NYMPH. ETHALION.
Charaxes Ethalion *Boisduval in Delegorgue Voy. Afriq.* ii. p. 593.
Nymphalis Erithalion *Boisduval MS.; Doubl. Westw. & Hewitson*, pl. 48. f. 1.
Zoolu, Port Natal. B. M.
22. NYMPH. PHRAORTES.
Charaxes Phraortes *E. Doubleday in Annal. Nat. Hist.* xx. p. 65.
Madagascar. Mus. Zool. Soc.
23. NYMPH. ZOOLINA.
Nymph. Zoolina *Westw. MS.; Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 53. f. 1.; *Angas, Illustr. Port Natal, Ins.* pl. 1. f. 7.
Amazoulu, Port Natal. B. M.
24. NYMPH. PYRRHUS.
Papilio Pyrrhus *Linnaeus, Syst. Nat.* ii. p. 749. n. 25.; *Clerck, Icones*, t. 25. f. 2.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 61. n. 192.; *Cramer, Pap.* pl. 220. f. A.B.; *Godart, Enc. M.* ix. p. 356. n. 22.; *Lucas, Hist. Nat. Lep. exot.* pl. 63. f. 2.
Eriboea Pyrrichia *Hübner, Verz. bek. Schm.* n. 433.
Amboyna. Mus. Banks, Soc. Linn.
25. NYMPH. EURVALUS.
♂ Papilio Euryalus *Fabricius, Ent. Syst.* iii. pt. 1. p. 70. n. 218.; *Cramer, Pap.* t. 74. f. A.B.
Eriboea Euryale *Hübner, Verz. bek. Schm.* n. 435.
♀ Papilio Nisus *Fabricius, Ent. Syst.* iii. pt. 1. p. 70. n. 219.; *Cramer, Pap.* pl. 150. f. A.B.; *Godart, Enc. M.* ix. p. 357. n. 23.; *Lucas, Hist. Nat. Lep. exot.* pl. 63. f. 1.
Amboyna.
26. NYMPH. SOLON.
Papilio Solon *Fabricius, Ent. Syst.* iii. pt. 1. p. 69. n. 216.; *Jones, Icones*, v. t. 63. f. 2.; *Godart, Enc. M.* ix. p. 357. n. 24.
—?
27. NYMPH. SEMPRONIUS.
Papilio Sempronius *Fabricius, Ent. Syst.* iii. pt. 1. p. 62. n. 194.; *Jones, Icones*, v. t. 67.; *Donovan's Drawings in Bibl. Hope, Oxford*; *Godart, Enc. M.* ix. pt. 1. p. 354.
Jasia Australis *Swainson, Zool. Ind.* 2d ser. t. 114.
Australia. B. M.
28. NYMPH. FABIVS.
Papilio Fabius *Fabricius, Ent. Syst.* iii. pt. 1. p. 64. n. 201.; *Godart, Enc. M.* ix. pt. 1. p. 353. n. 8.
Papilio Euphanes *Esper, Aust. Schm.* p. 238. t. 59. f. 1.
India, Indian Islands. B. M.
29. NYMPH. ATHAMAS.
Papilio Athamas *Drury, Ill.* i. t. 2. f. 3, 4.; *Cramer, Pap.* t. 89. f. C.D.; *Godart, Enc. M.* ix. pt. 1. p. 353. n. 11. (Nymphalis Ath.); *Swainson, Zool. Ill.* 2d ser. t. 90. (Jasia Ath.).
Papilio Pyrrhus *Donovan, Ins. India*, pl. 29. f. 3.
Eriboea Athamis *Hübner, Verz. bek. Schm.* n. 430.
East India, China, Java. B. M.
30. NYMPH. SCHREIBERI.
Nymphalis Schreiberi *Godart, Enc. M.* ix. Append. p. 825. n. 11—12.; *Horsfield, Descr. Cat. Lep. East Ind. Co.* pl. 6. f. 3. 3a.
Java. B. M.
31. NYMPH. LAMPEDO.
Eriboea Lampedo *Hübner, Samml. exot. Schm.* Band ii. pl. —.
—?
32. NYMPH. EUDAMIPPUS.
Charaxes Eudamippus *E. Doubleday in Annal. Soc. Ent. France*, 1843, p. 218. pl. 8.
Silhet, Assam.
33. NYMPH. DELPHIS.
Charaxes Delphis *E. Doubleday in Annal. Soc. Ent. France*, 1843, p. 217. pl. 7.
Silhet, Assam.
34. NYMPH. DOLON.
Charaxes Dolon *Westw. Cabinet Orient. Entomol.* p. 55. pl. 27. f. 2, 3.
Malwah, East India. B. M.
35. NYMPH. BERNARDUS.
Papilio Bernardus *Fabricius, Ent. Syst.* iii. pt. 1. p. 71. n. 223.; *Jones, Icones*, iv. t. 65. f. 2.; *Donovan, Ins. of China*, pl. 34.
Satyrus Bernardus *Godart, Enc. M.* ix. p. 477. n. 2.
Papilio Polixena *Cramer, Pap.* t. 54. f. A.B.
Nymphalis Polixo *Godart, Enc. M.* ix. p. 399. n. 169.
Doxocopa Epilais *Hübner, Verz. bek. Schm.* p. 464.
Northern India, China. B. M.
36. NYMPH. PSAPHON.
Charaxes Psaphon *Westw. Cabinet Orient. Entom.* p. 43. pl. 21. middle and left-hand figs.
Ceylon.
37. NYMPH. MARMAX.
Charaxes Marmax *Westw. Cabinet Orient. Entom.* p. 43. pl. 21. middle right-hand and two lower figs. (N. Bernardus var.?).
Silhet, Assam.

38. NYMPH. MARICA.

Papilio Marica Fabricius, Ent. Syst. iii. pt. 1. p. 113. n. 346.; Donovan, Naturalists' Repos. ii. pl. 37. f. 1.
 —? Mus. Banks, Soc. Linn.

39. NYMPH. BERENICE.

Papilio Berenice Drury, Ill. iii. t. 11. f. 1, 2.; Fabricius, Ent. Syst. iii. pt. 1. p. 114. n. 350.; Donovan, Nat. Repository, iii. pl. 107.
Papilio Zingha Cramer, Pap. pl. 315. f. B. C.
Tigridia Zingha Hübner, Verz. bek. Schm. n. 355.
 West Coast of Africa, Sierra Leone.

40. NYMPH. MYCERINA.

Nymphalis Mycerina Godart, Enc. M. ix. p. 369. n. 65.; Lucas, Hist. Nat. Lep. exot. pl. 65. f. 2.; Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 53. f. 2.
 Sierra Leone. B. M.

41. NYMPH. EUPALE.

Papilio Eupale Drury, Ill. iii. t. 6. f. 3. (1783).

Papilio Amasia Fabricius, Ent. Syst. iii. pt. 1. p. 136. n. 419. (1793); Jones, Icones, v. t. 15. f. 2.; Godart, Enc. M. ix. p. 389. n. 137.; Lucas, Lep. exot. t. 69.
 Sierra Leone, Ashanti. B. M.

42. NYMPH.? THERSANDER.

Papilio Thersander Donovan, Nat. Repository, iii. t. 75.
 (but not of Fabricius, which is a *Papilio*).
Obs. Donovan says his figure is copied from Jones's Icones, but that collection of drawings contained no such figure.
N. Lampedo Hübner. ? ?
 Sierra Leone.

43. NYMPH.? MILTIADES.*

Papilio Miltiades Fabricius, Ent. Syst. iii. pt. 1. p. 66. n. 205.; Jones, Icones, v. t. 80. f. 2.; Donovan, Drawings in Bibl. Hope, Oxford; Godart, Enc. M. ix. p. 358. n. 26.
 —?

* It is very doubtful whether this species belongs to the present genus. From Donovan's drawings referred to above the fore wings appear to be much more rounded at the tip than in the other species of *Nymphalis*, whilst their inner margin is dilated, as in some species of *Euploea*. It may possibly be one of the *Satyridæ* allied to *Philoctetes*.

Genus LXXVI. PHILOGNOMA.

PHILOGNOMA *Boisduval MS., E. Doubleday.*
 PALLA and COEA p. *Hübner.*
 NYMPHALIS p. *Godt.*

BODY very robust; wings large, with a straight oblique bar running across all of them on the under side; hind wings with a short tail, and with several ocelli near the anal angle beneath.

HEAD large, hairy, without a frontal tuft.

Eyes very prominent, naked.

Labial Palpi porrected obliquely; the tip elevated considerably above the level of the eyes. Terminal joint slender and acute, extending in front of the head nearly as far as the length of the head.

Antennæ short, about two fifths of the length of the fore wings, nearly straight; terminated by a very gradually formed slender club, finely carinated beneath.

THORAX robust, woolly; metathorax hairy.

Fore Wings large, subtriangular. Veins strong. Fore margin much arched, finely serrulated. Apex rather acute. Apical margin more or less emarginate, two thirds of the length of the fore margin. Inner margin nearly straight, equal in length to the apical margin. Costal vein extending to the middle of the costa. Postcostal vein with the first and second branches arising before the anterior extremity of the discoidal cell, and both extending to the costa; the second joining it at about five sixths of the length of the wing; third branch arising just beyond the extremity of the cell, and extending nearly to the apex of the costa; fourth branch arising just beyond the third, at a little distance before the middle of the length of the wing, running near the third branch for a considerable distance, and then becoming slightly deflexed. Upper disco-cellular extremely short, almost obsolete, arising at about the distance of two fifths from the base; middle disco-cellular short, transverse; lower disco-cellular transverse, much longer and curved, but slender, uniting with the third branch of the median vein at a short distance beyond its origin, and thus closing the discoidal cell considerably before the middle of the wing; this third branch much arched.

Hind Wings subovate. Costal margin curved. Apical margin rounded, slightly scalloped; the third branch of the median vein extending into a short tail; the first branch also extending into a more prominent lobe, between which and the anal angle the margin is deeply emarginate. Veins strong. Precostal vein erect, forked at the tip. Discoidal cell imperfectly closed by a very delicate disco-cellular veinlet, which is united with the median vein between the first and second branches.

Fore Legs of the male very delicate, and slightly brushed in *Varanes*; much more thickly squamose in *Decius*. The tarsus about half the length of the tibia. *Fore Legs* of the female slender, scaly, and scarcely longer than those of the male in *Decius*; but much longer, and still more slender, in *Varanes*. The tarsus two thirds of the length of the tibia; broadly dilated at the extremity into an oval compressed palette, the inner edge of

which is armed with four pairs of short spines, indicating the articulations. Tarsus in Decius shorter, but broader, and of more uniform width.

Four Hind Legs rather short, moderately thick. Tibiæ flattened beneath; each lateral edge armed with a row of small fine spines. Tibial spurs short, acute. Tarsi beneath flat, with four rows of fine spines. Claws and paronychial short.

ABDOMEN rather small, ovate.

TRANSFORMATIONS unknown.

These insects are very closely allied to *Nymphalis* in their general appearance, as well as in the majority of their characters. Like most of the species of that genus, also, they are natives of Africa. They are, however, distinguished by the hind wings being furnished with only a single tail, as well as by the straight dark fascia running obliquely across all the wings on the under side. The discoidal cell of the hind wings is also much shorter, being terminated by a very slender vein, which is united to the median vein between the origins of the first and second branches; a peculiarity we have hitherto rarely met with in the numerous species of this family.

The species represented in our Pl. XLIX. f. 3., from Ashanti, is smaller than the typical species Decius and Varanes, and differs from them in the third branch of the postcostal vein arising very close beyond the extremity of the discoidal cell, and the fourth branch about half way between the base of the third branch and the tip of the wing. On the under side, its wings are varied with red-brown, having numerous short, slender, transverse, and angulated black lines, with a rather broad silvery bar across the wings, extending from near the tip of the fore wings nearly to the anal angle of the hind wings, bounded behind by a straight black line.

The *Nymphalis Erolia* of Fabricius, placed by Godart between Decius and Varanes, I have ascertained from Donovan's drawings in the Hopean Library at Oxford to be identical with *Cynthia Arsinoe*.

PHILOGNOMA.

1. PHILOGN. DECIOUS.

Papilio Decius Fabricius, Ent. Syst. iii. pt. 1. p. 67. n. 210.; Cramer, Pap. t. 114. f. A.B.; Drury, Ill. iii. pl. 6. f. 1, 2.; Godart, Enc. M. ix. p. 363. n. 46. (Nymphalis D.); Lucas, Hist. Nat. Lep. exot. pl. 64. f. 2.; Donovan, Nat. Repos. vol. 4. pl. 109.

Palla Decia Hübner, Verz. bek. Schm. n. 441.

Sierra Leone, Ashanti.

B. M.

2. PHILOGN. VARANES.

Papilio Varanes Fabricius, Ent. Syst. iii. pt. 1. p. 66. n. 206.; Cramer, Pap. t. 160. f. D.E. t. 388. f. A.B.; Godart, Enc. M. ix. p. 364. n. 48.; Lucas, Hist. Nat. exot. pl. 65. f. 1.

Coea Varanessa Hübner, Verz. bek. Schm. n. 442.

Var. *Drury, Ill. iii. pl. 31. f. 1, 2.*

Sierra Leone, Ashanti, Caffraria.

B. M.

3. PHILOGN. LAODICE.

Papilio Laodice Drury, Ill. iii. pl. 26. f. 3. (1783).

Papilio Lycurgus Fabricius, Ent. Syst. iii. pt. 1. p. 67. n. 209.; Jones Icones. v. t. 69. f. 1.

Nymphalis Lycurgus Godart, Enc. M. ix. p. 364. n. 49.

Sierra Leone.

4. PHILOGN. LICHAS *E. Doubleday MS.; E. Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 49. f. 3.*

Ashanti.

B. M.

Genus LXXVII. MEGISTANIS.

MEGISTANIS *Boisduval MS.*

ERIBOEA and COEA p. *Hübner.*

NYMPHALIS p. *Godt.*

BODY very robust; fore wings large, subangulated below the apex; hind wings with one or two short tails.

HEAD moderate-sized, transverse, slightly tufted in front.

Eyes prominent, naked.

Labial Palpi large, porrected obliquely, not reaching to the level of the top of the eyes, extending further in front than the length of the head; inner edges close together; the tips converging, forming together a long conical front, thickly clothed with scales, except the back of the middle joint, which is furnished with hairs; those near the middle of the joint being long and recurved, and applied to the face.

Antennae not quite half the length of the fore wings, rather slender, nearly straight; terminated by a distinct elongate-ovate club, gradually formed, occupying about one fifth of the length of the antenna, delicately carinated on the inside beneath.

THORAX robust, oblong, truncated behind, densely woolly; the metathorax clothed with long hairs.

Fore Wings large, elongate-subtriangular. Fore margin well arched; apical angle rounded. Apical margin two thirds of the length of the anterior, slightly angulated below the apex, deeply emarginate in the middle.

Inner margin nearly straight, about as long as the apical. Costal vein strong, extending about two thirds of

the length of the fore margin, and then uniting with the costa. Postcostal vein slender; the first and second branches arising before the extremity of the discoidal cell; third branch arising a little before the middle of the length of the wing, and running close to the postcostal vein for some distance, when it suddenly widens, approaches close to the costa, along which it runs to the tip of the wing; fourth branch arising at about five sixths of the length of the wing, and extending to the apical margin a little distance below the apex. Upper disco-cellular vein very minute, arising from the postcostal at about one third of the length of the wing from the base; middle disco-cellular very short and rather oblique; lower disco-cellular longer, nearly transverse, closing the discoidal cell at a little distance more than one third of the length of the wing from the base, and uniting with the third branch of the median vein at a very short distance beyond its origin; this third branch of the median vein regularly arched.

Hind Wings triangularly ovate. Costal margin rounded at the base, slightly arched to the outer angle. Apical margin rounded, more or less scalloped, especially towards the anal angle; the tip of the third branch of the median vein, and occasionally that of the first branch, being elongated into a slender, acute, short tail. Anal margin densely hairy; upper surface slightly varied in its colours; under surface beautifully marked with slender, irregularly undulating, black lines. Precostal vein erect, its tip bent slightly outwards. Postcostal vein branching near its base. Lower disco-cellular extremely slender, closing the discoidal cell, and uniting with the outer branch of the median vein at a very short distance from its base.

Fore Legs of the male small and pectoral. Femur and tibia of nearly equal length; the former furnished with short hairs beneath, set on at right angles. The tibia thickly hairy; the hairs set on obliquely. Tarsus not more than one third the length of the tibia, similarly hirsute, slender, attenuated, apparently with an articulation near the tip. *Fore Legs* of the female not longer than those of the male, more scaly. Tibia shorter than the femur. Tarsus as long as the tibia, slightly compressed, and widening towards the apex, which is obliquely truncate, exhibiting several pairs of small spines beneath, indicating the articulations.

Four Hind Legs robust, scaly, moderately long. Tibia of the middle pair shorter than the femur, with a patch of short plush on the inside at the base; under side with two rows of fine short spines. Tibial spurs short. Tarsi as long as the tibiæ, more slender, scaly; under side with several rows of fine short spines. Ungues small, very acute, and curved. Paronychia minute.

ABDOMEN small, somewhat conical.

TRANSFORMATIONS unknown.

The species of this genus bear considerable affinity to those of *Nymphalis* in general appearance and size, as well as in the peculiarity of the markings of the under surface of the hind wings. They are, in fact, the American representatives of the typical *Nymphales*; differing from them at once in the position of the fourth branch of the postcostal vein of the fore wings, which in *Nymphalis* arises close beyond the extremity of the discoidal cell, instead of near the tip of the wing, as in *Megistanis*.

The insect represented in our Pl. XLVIII. fig. 2. as an example of this genus, recedes from the type in its shorter and more entire fore wings, in the greater depth of the scallops in the hind wings, two of them forming more decided tails than in *M. Cadmus*. The under surface of all the wings in *M. Bæotus* is pale bluish white, with numerous slender black markings; each wing near the inner angle being marked with a patch of fulvous, simulating an indistinct ocellus in the hind wings. In this and other respects, *M. Bæotus* is very closely allied to *M. Æclus*; but that species has the upper surface of all the wings of a black colour, the interior being marked near the tip with a few small white dots. Notwithstanding this difference, it appears to us not improbable that *M. Bæotus* may ultimately prove to be only a local variety of *M. Æclus*.

We know nothing of the habits or transformations of the species of this genus.

MEGISTANIS.

1. MEG. CADMUS.

Papilio Cadmus Cramer, Pap. t. 22. f. A. B.
Papilio Acheronta Fabricius, Ent. Syst. iii. pt. 1. p. 76.
 n. 239.; *Godart, Enc. M. ix. p. 358. n. 27.*
Papilio Pherecydes Cramer, Pap. t. 330. f. A. B.
Coea Pherecydes and Coea Acheronta Hübner, Verz. bek.
Schm. n. 442. 444.
 Brazil to New York. B. M.

2. MEG. ÆCLUS.

Papilio Æclus Fabricius, Ent. Syst. iii. pt. 1. p. 63. n.
 198.; *Godart, Enc. M. ix. p. 355. n. 16.*

Papilio Aeilus Cramer, Pap. t. 317. f. A. B.
Eriboea Aile Hübner, Verz. bek. Schm. n. 428.
 Amboyne.

3. MEG. BÆOTUS.

Megistanis Bæotus Boisduval MS.; E. Doubleday, List
Lep. Brit. Mus. p. 109.; Doubl. Westw. & Hewits.
Gen. Diurn. Lep. pl. 48. f. 2.
 Sta Fé de Bogotá B. M.

Genus LXXVIII. PROTOGONIUS.

PROTOGONIUS *Hübner*.

HELICODES *Boisduval MS., E. Doubleday, List. Lep. Brit. Mus.*

FABIUS *Duncan*.

NYMPHALIS p. *Godt.*

BODY moderately robust; wings large; fore wings long, deeply angulated in the middle of the apical margin; hind wings with a long spatulate tail.

HEAD moderately large, finely hairy, with a minute conical tuft in front.

Eyes large, prominent, naked.

Labial Palpi large, obliquely porrected; the tip elevated considerably above the level of the top of the eyes, and extending in front as far as the length of the head, clothed with scaly hairs, flattened in front; the apical half of the second joint beset on the upper side with short hairs; apical joint slender, acute at the tip, and quite distinct from the preceding joint when seen from above.

Antennæ short, not more than one third of the length of the fore wings, slightly curved; terminated by a very gradually formed slender club, finely carinated beneath on the inside, and slightly obtuse at the tip.

THORAX oval, not very large, woolly.

Fore Wings long and wide. The fore margin very strongly arched; apical angle more or less obtuse. Apical margin not more than half the length of the anterior, but with a large angular projection in the middle, below which the margin is very oblique to the inner angle. Inner margin slightly curved, and somewhat longer than the apical. Costal vein moderately strong. Postcostal slender, with the first and second branches arising before the anterior extremity of the discoidal cell, and both running into the costal vein near the middle of the length of the wing, not widely apart; third branch arising near the middle of the length of the wing, and extending to the tip, being slightly deflexed for a short distance preceding the apex. Upper disco-cellular vein very short and oblique, arising at the distance of two fifths of the length of the wing from the base; middle disco-cellular still shorter, but less oblique; outer disco-cellular four times as long as the preceding, less oblique, curved; closing the discoidal cell in a rather acute point, before the middle of the disc of the wing, and uniting with the third branch of the median vein at a smaller distance from its origin than exists between the base of the second and third branches; this third branch slightly curved, running to the extremity of the angular projection of the apical margin.

Hind Wings broadly triangular. Costal margin nearly straight, but with the base rounded. Apical margin with a long spatulate tail in the middle, down which the extremity of the third branch of the median vein is extended. Precostal vein short, straight, and subclavate. Costal vein not extending to the outer angle of the wing, which is obtuse; the extremity of the branch of the postcostal vein extending to the middle of this obtuse part. Discoidal cell short, closed by a slightly curved outer disco-cellular vein, which is united to the median exactly at the origin of its third branch. Anal margin deeply grooved.

Fore Legs of the male very small, thickly clothed with scales and scale-like hairs, not forming a brush. Tibia nearly as long as the femur. Tarsus about half the length of the tibia, slender, exarticulate. *Fore Legs* of the female very short, but rather longer than those of the male, thick, densely squamose. Tibia two thirds the length of the femur. Tarsus as long as, and broader than, the tibia, compressed; the basal joint occupying rather more than half the tarsus; second, third, and fourth joints oblique, armed beneath with several small spines. Terminal joint minute, without claws.

Four Hind Legs short, thick, squamose. Tibiæ spined irregularly throughout. Tibial spurs short. Tarsus very squamose, with several rows of short spines beneath; last joint terminated above by long slender bristles. Claws and outer lobe of the paronychialia nearly similar in form; inner lobe of the latter shorter, slender, incurved. Pulvillus small.

ABDOMEN rather small, oval.

LARVA subcylindrical, granulose, not spined, slightly attenuated behind; head with two short obtuse horns on the hinder part.

CHRYsalis very short and thick, with a strong conical protuberance formed by the middle of the back of the abdomen.

The Caterpillar of the typical species of this genus, represented by Stoll, exhibits a strong general resemblance to that of the typical Nymphales. It has the body rather tapering towards the hinder extremity, and is shagreened, without any horns or setose tubercles on the segments of the body, except a pair of short obtuse erect horns on the head, and two conical protuberances at the sides. It is of a dull green colour, with a dark brown stripe along the back, and spots and short stripes of the same colour on the sides. The head is black with green lines, and on the upper part are two, and on each side of the anterior part of the first segment three, small rounded

yellow spots. It feeds on the leaves of a species of *Piperis*, but only during the night, concealing itself in the day by rolling a portion of the leaf around its body, in order to protect itself from the sun, by fastening the edge of the whorl to the disc of the leaf by silken threads, in the manner of the *Hesperiidæ* and *Tortricidæ*. The *Chrysalis* is greyish, tinged with flesh colour, and marked with small brown spots and transverse lines, and is attached by the tail to the stalk of the plant, which had previously received a coating of silk round the place of attachment.

The Perfect Insect exhibits a much less decided relation to *Nymphalis*; the triangular form of the fore wings, and the very broad hind ones furnished with a long tail give it a very peculiar appearance; whilst, in the general colour of the upper surface of the wings, it resembles some of the *Heliconiæ*. The complete obliteration of one of the branches of the postcostal vein of the fore wings, and the junction of the first and second branches with the costal vein, are characters to be noticed, as well as the abbreviation of the costal vein of the hind wings.

Like *Clytemnestra*, the type and only known species of this genus is a native of Tropical America, and appears to be subject to a remarkable amount of variation, according to the localities in which it is found. In the British Museum Collection are several of these varieties, or geographical subspecies. The one represented in our plate has the angle of the apical margin of the fore wings very much produced, and the bar beyond the middle of the same wings formed of distinct spots. Another has the fore wings much shorter than in the type; the yellow oblique bar of these wings very broad, without any subapical yellow spots. Another from Bolivia is nearly similar to the last in form; but the space from the anal angle to the tail of the hind wings is much more oblique and entire, not scalloped, and the yellow bar of the fore wings is narrower. Others again, from Venezuela, have the wings somewhat less elongated than in the type, with a regular row of yellow subapical spots near the apical margin of the fore wings.

PROTOGONIUS.

1. PROTOG. HIPPONA.

Papilio Hippona Fabricius, Ent. Syst. iii. pt. 1. p. 180. n. 559.; Donovan, Insects of India, pl. 35. f. 1.; Godart, Enc. M. ix. p. 362. n. 44. (Nymphalis H.).
Papilio Fabius Drury, Ill. iii. t. 16. f. 1, 2.; Cramer, Pap. t. 90. f. C.D.; Stoll, Suppl. Cram. t. 2. f. 1. A.B.C.D.
Protopogonius Fabius Hübner, Verz. bek. Schm. n. 1058.

Helicodes Hippona Boisduval MS.; E. Doubl. List. Lep. Brit. Mus. p. 112.
Fabius Hippona Duncan, Nat. Lib. Entom. v. pl. 19. f. 2. B.M.
Var. Protopogonius Cecrops E. Doubl. MS.; Doubl. Westw. & Hewitson, Gen. Diurn. Lep. pl. 49. f. 2. B.M.
 Guyaquil?

Genus LXXIX. HYPNA.

HYPNA Hübner.

HECALENE Boisduval MS., E. Doubleday, Cat. Lep. Brit. Mus.

NYMPHALIS p. Godt.

BODY robust; wings large; fore wings more or less hooked at the tip; hind wings furnished with a spatulate tail; under side of the wings marked with silvery patches.

HEAD of moderate size, hairy, slightly tufted in front.

Eyes prominent, naked.

Labial Palpi nearly erect, elevated higher than the level of the top of the eyes, scaly; the inside of each furnished with a coating of appressed hairs; middle joint also with a small erect tuft on the middle of the upper surface; terminal joint small, compressed, and truncate at the tip when seen from the side.

Antennæ rather short, not half the length of the fore wings, nearly straight; terminated by a slender, elongated, and gradually formed club, finely carinated beneath on the inside. Tip rather obliquely rounded off.

THORAX elongate-ovate; not very hirsute.

Fore Wings large, subtrigonal, more or less hooked at the tip. Fore margin very much curved; apical angle acute. Apical margin nearly three fourths the length of the anterior, very slightly scalloped. Inner margin nearly straight, and equal in length to the apical margin. Costal vein strong, extending to three fourths of the length of the costa. Postcostal vein slender; its first and second branches arising before the extremity of the discoidal cell, and both running into the costal vein; the first branch near the middle, and the second nearly at the extremity of the costal; third branch of the postcostal arising near the middle of the wing, and extending nearly to the apex; fourth branch arising at a little distance beyond the middle of the wing, and extending to the tip, being curved downwards a little before it reaches the extremity of the wing; terminal part of the vein reaching below the apex. Upper disco-cellular vein very short, oblique, arising at the length of one third of the wing from the base; middle disco-cellular obsolete; the two discoidal veins arising together at the extremity of the upper disco-cellular; lower disco-cellular arched transversely, the curve being towards the base of the wing, and uniting with the third branch of the median vein at the distance of a line from its origin, closing the discoidal cell; this third branch of the median vein very much arched.

Hind Wings subovate. Costal margin arched. Apical margin slightly scalloped; the third branch of the median vein extending into an elongated and spatulated tail, the space between which and the anal angle is more deeply scalloped; the first branch of the median vein terminating in a very short obtuse tail, within which is a deep, irregular, oblique emargination, the submedian vein extending to its inner extremity. Disc of the wing marked beneath with numerous silvery patches. Precostal vein short, curved slightly outwards. Postcostal vein branching considerably nearer the base of the wing than the branching of the median vein. Discoidal cell imperfectly closed by a very delicate outer disco-cellular vein, uniting with the median vein exactly at the origin of its third branch.

Fore Legs nearly alike in size and clothing in both sexes, being rather thickly covered with scaly hairs, not forming a dense brush. Fore legs of the male with the tibia nearly equal to the femur in length. Tarsus rather short, slender when denuded of scales, and exarticulate. Tibia in the female two thirds of the length of the femur. Tarsus equal in length to the tibia; basal joint occupying rather more than half the tarsus, unarmed below; second, third, and fourth joints short, each armed beneath with several slender spines; terminal joint minute, unarmed.

Four Hind Legs short and robust, scaly. Tibia with a scarcely perceptible row of minute spines on each side beneath. Tibial spurs very short. Tarsus with four rows of minute spines beneath. Pulvillus very short. Claws very slender. Outer division of the paronychialia very similar in appearance to the claws.

ABDOMEN small, ovate-conic.

TRANSFORMATIONS unknown.

The brilliant silvery spots on the under side of the wings of the only species which belongs to the present genus at once distinguish it from all the neighbouring groups, to several of which it is allied in the dilated tail of the hind wings. From *Cymatogramma*, to which it is most nearly allied in its general form, it is distinguished by the possession of the four regular branches of the postcostal vein of the fore wings, and the smaller club of the antennæ.

The only species of the genus is a native of the tropical parts of South America. Donovan and Hübner have figured a variety having the apex of the fore wings produced into an acute hook; and our Pl. XLIX. f. 1. represents another variety, distinguished by its small size and the dark red colour with which the inner half of the hind wings is suffused. These varieties, which appear constant, are doubtless to be considered as geographical varieties or subspecies.

HYPNA.

1. HYPNA CLYTEMNESTRA.

Papilio Clytemnestra Fabricius, Ent. Syst. III. pt. 1. p. 123. n. 375.; Cramer, Pap. t. 137. f. A. B., t. 364. f. A. B.; Godart, Enc. M. ix. p. 363. n. 45.; Donovan, Nat. Repository, vol. iv. pl. 125.; Hübner, Samml. exot. Schm. Band ii. f. —. (Hypna Cl.); Lucas, Hist. Nat. Lep. exot. pl. 64. f. 1.

Brazil, Guiana.

B. M.

Var. *Doubl. Westw. & Hewits, Gen. Diurn. Lep. pl. 49. f. 1.*

Colombia.

B. M.

Var. *Hecalene Iphigenia Boisd. MS.*

Cuba.

Genus LXXX. CYMATOGRAMMA.

CYMATOGRAMMA *E. Doubleday MS.*

BODY rather small, but robust; wings large for the size of the body, of similar form in both sexes, thickly irrorated beneath with transverse strigæ; hind wings tailed.

HEAD small, transverse, not tufted in front.

Eyes naked, moderately large.

Labial Palpi elevated considerably above the level of the top of the eyes, nearly erect, thickly clothed with scaly hairs, the front also furnished with short slender bristles, a conical tuft of bristle-like hairs on the back of the second joint near the tip; third joint small, obtuse, oval.

Antennæ short, not more than two fifths of the length of the fore wings, slender, nearly straight; terminated by a gradually formed, rather small, but decided club.

THORAX elongate-ovate, not densely hairy; wings large.

Fore Wings subtrigonal. Fore margin arched. Apical angle obtusely rounded. Apical margin nearly straight, two thirds of the length of the anterior margin, very slightly scalloped. Inner margin nearly straight, about equal in length to the apical margin. Costal vein strong, extending nearly to the tip of the wing. Postcostal vein with the first branch arising before the anterior extremity of the discoidal cell, very short, and uniting

with the costal vein before the middle of the wing; second branch arising at about the distance of three fourths of the wing from the base, extending to the tip of the wing; this second branch is connected with the costal vein by a very short, oblique, and slender veinlet, arising just beyond its origin; terminal portion of the postcostal vein running to the apical margin below the apex. Upper disco-cellular vein very short, oblique; middle disco-cellular rather longer and less oblique; outer disco-cellular still longer and more transverse, slightly arched, uniting with the third branch of the median vein at a short distance from its origin, thus closing the discoidal cell before the middle of the wing; this third branch is slightly curved.

Hind Wings subovate. Costal margin arched. Apical margin scalloped. The third branch of the median vein extending into an elongated tail, not dilated at the tip. Anal angle rounded. Precostal vein short, nearly erect, with the tip bent outwards. Postcostal vein branching near the base. Outer disco-cellular vein distinct, arching, closing the short discoidal cell, uniting with the third branch of the median vein close to its origin. The disc of the wing, near the base of the tail, is marked with several small black subocellated spots.

Fore Legs of the male very minute and feathered. Femur with a row of hairs set on at right angles beneath. Tibia shorter than the femur. Tarsus about half the length of the tibia, and very slender. *Fore Legs* of the female considerably longer, and twice as thick as those of the male, thickly squamo-hirsute. Tibia about two thirds of the length of the femur. Tarsus nearly as long as the tibia. Basal joint scarcely occupying half the length of the tarsus; it and the three following joints furnished on the inside with a pair of rather strong spines.

Four Hind Legs short and rather robust, squamose. Tibiæ and tarsi furnished beneath with short slender spines. Claws long, slender, curved, and acute. Terminal joint of the tarsus armed above with a series of setæ longer than the claws.

ABDOMEN small, ovate.

TRANSFORMATIONS unknown.

We are only acquainted with one species of the present genus, which is a native of Honduras, and which seems to form the connecting link between *Protopgonius* and *Hypna* on the one side, and *Paphia* on the other. The comparatively small size of the body, and the large size and rather delicate texture of the wings, indicate a much less powerful style of flight than that of *Nymphalis* and its allies. The arrangement of the veins of the fore wings also merits some remarks. Instead of the ordinary four free branches of the postcostal vein, each extending, as we have seen in so many of the preceding genera, to the costal and apical margins of the wing, we here find several of these branches obliterated; there is, in fact, only one branch, instead of two, preceding the extremity of the discoidal cell, and this branch is extremely short and runs into the costal vein, which extends nearly to the tip of the wing; at about three fourths of the length of the wing the postcostal vein is forked, the anterior division of the fork of course representing one of the branches; but on the anterior side of this branch, and close to its origin, is a minute oblique veinlet connecting it with the costal vein. In the hitherto little studied condition of the veins it is perhaps premature to determine what is the homology of this little veinlet, but analogy would suggest that it is the third branch of the postcostal vein (the second being obsolete), and that, although arising from the front of the succeeding branch, we must consider it to have normally arisen from a point in the postcostal vein preceding the furcation, and to have been ankylosed, partly with the body of the postcostal vein preceding the furcation, and partly with the anterior branch of this furcation, in which case this anterior branch will represent the real fourth branch of the postcostal vein. It is especially by the study of an extended series of such anomalies as the present, that we are likely to obtain a correct idea of the pterology of Lepidopterous insects, a branch of the science hitherto almost in its infancy. We find nearly the same arrangement of the branches of the postcostal vein in *Paphia Halice*. Indeed it is impossible to doubt that this genus and *Paphia* are very closely allied, if not absolutely congeneric, regard being had to the modifications which occur in the veins of the species admitted into the latter genus.

The under surface of the wings of this interesting species is quite unlike the upper surface; instead of the plain uniform tints, we there see the entire disc thickly marked with minute darker transverse bars, except a transversely oval patch at the base of the tail of the hind wings, which is destitute of these bars, but which bears the black and white spots seen on the upper side. This peculiar character of the markings of the under side of the wings is also found in *Paphia Verticordia*; indeed, were I not acquainted with both sexes of *Echemus*, I should have considered it a variety of the male of that species, which wants the pale markings of the upper side of the fore wings of the female, as figured in Hübner's *Zutrage*.

CYMATOGRAMMA.

1. CYM. ECHEMUS *E. Doubleday MS.; Doubl. Westw. & Hewits. Gen. Diarn. Lep.* pl. 49. f. 4.
Honduras. B.M.

Genus LXXXI. PAPHIA.

PAPHIA Fabricius (*Syst. Gloss. pars*), Boisduval MS., E. Doubleday.

ANAEA and MEMPHIS Hübner.

NYMPHALIS p. Godt.

BODY moderately robust; wings often with a metallic gloss, under side generally indistinctly reticulated; female with the upper side of the wings more variegated with brown or pale-coloured spots than the male.

HEAD of moderate size, not tufted in front.

Eyes large, prominent.

Labial Palpi rather small, nearly erect, elevated considerably above the level of the eyes, thickly squamose, broad in front, porrected but to a very short distance in front of the face. Terminal joint very minute but distinct; preceding joint rather thickly hairy on the back beyond the middle, the hairs applied to the face.

Antennæ short, scarcely more than one third of the length of the fore wings, slender; terminated by a gradually formed but slender club, obliquely rounded off at the tip, finely carinated beneath.

THORAX oval, woolly, pilose on the metathorax.

Fore Wings large. Fore margin strongly arched, somewhat elbowed near the base. Apical angle more or less acute. Apical margin about two thirds of the length of the fore margin; in some species, however, the inner angle is considerably elongated, and the inner margin is, in such cases, deeply emarginate near the tip. Costal vein reaching nearly to the tip of the wings. First (and second when existing) branch arising before the anterior extremity of the discoidal cell; third branch (in Portia) arising at about three fourths of the length of the wing, extremely short, and joining the costal vein; fourth branch arising at about the length of four fifths of the wing, and extending to the apex, being slightly deflexed near the tip in some species. Upper disco-cellular short, oblique, arising at about the length of two fifths of the wing; middle disco-cellular also very short; lower disco-cellular very slender, arched, uniting with the third branch of the median vein at about the same distance from its origin as exists between the base of the second and third branches, closing the discoidal cell rather obliquely at some distance before the middle of the wing.

Hind Wings subovate. Costal margin rounded (in some species the outer angle is somewhat dilated). Outer margin generally entire; but in some species it is scalloped, the extremity of the third branch of the median vein being extended, in a considerable number of the species, into a tail, which is often dilated at the extremity. Precostal vein oblique, curved, the tip bent outwards. Discoidal cell imperfectly closed by a very delicate outer disco-cellular vein.

Fore Legs of the male very small and slender, hairy, but scarcely forming a brush. Tibia rather shorter than the femur. Tarsus slender, and nearly equal to the tibia in length, exarticulate. *Fore Legs* of the female very similar to those of the male in thickness and general appearance; the basal portion of the tarsus is, however, rather more thickened, and rather oblique at the tip, where are several spines varying in length, indicating the articulations, which are also seen through the coating of scales.

Four Hind Legs short, and rather robust, thickly scaly. Tibia with a few short spines placed irregularly beneath; tibial spurs very short. Tarsus nearly as thick as the tibia, scaly, slightly spinose beneath.

ABDOMEN rather small and subovate.

LARVA elongate, scabrous, setose; head square, tubercled.

CHRYsalis short, swollen, especially the abdominal portion; destitute of conical protuberances.

This is a group of insects confined to the hottest portions of South America and the West India Islands, having the wings, in many of the species, glossed with metallic tints. They are, however, extremely difficult to determine and describe specifically, owing to the ill-defined character of the markings, more especially on the under side of the wings. This confusion has partially arisen from the want of a careful examination of the minute characters of the species, such as the arrangement of the veins of the wings, and the structure of the fore feet. By adopting this unerring guide I have been led to discover that the opposite sexes do not vary in the form of the wings in the majority of the species; and, hence, that the tailed and tailless specimens which have been placed in collections under the name of Ryphea, and regarded as males and females, are, in fact, distinct species, although so exactly alike in other respects that it is only necessary to cut off the tails of some of them to obtain the supposed female, of which, however, tailless males exist, as proved by the fore feet; whilst, on examining the veins of their wings, we find that these individuals belong, in fact, to two distinct sections of the genus. On the contrary, the same mode of examination has proved, that the Anaca Halice of Hübner, with large white spots on the fore wings, is the female of tailed males, also closely resembling Ryphea, but Hübner's figure of the female does not represent the tail of the hind wings sufficiently long. It required, however, the direct observation of an entomologist upon the spot to determine the identity of the sexes when the hind wings differ in being tailed or tailless, according to the sex; and this has been done by M. Beske with reference to P. Phidile of Hübner, the male of which has the hind wings entire, but coloured exactly like those of the male of Halice, whilst they are tailed in the female, which is marked like the male but destitute of the splendid purple gloss. The true Ryphea of Cramer has the hind wings produced into an acute angle, rather than tailed. The male of P. Nessus has the wings tailed as well as the female, and is also marked with two small transparent spots in the middle of the wings, which are intensely tinged with

violet-purple. The tailed male of *P. Verticordia* very nearly resembles our figure of *Cymatogramma Echemus*, whilst the female has the fore wings marked with pale spots beyond the middle, as figured by Hübner. So, again, the *P. Basilia* of Cramer, which has been regarded as the opposite sex of his *P. Arachne* (*P. Morvus*), differs in like manner, and must be regarded as distinct, belonging equally to a distinct section. The appreciation of these remarks, and a careful examination of the minute characters alluded to, will, I trust, enable the Lepidopterist to clear up the difficulties which have attended the determination of these butterflies.

The veins of the wings, in the insects of this genus, exhibit some modifications which are worthy of note, as affording instances of the manner in which one or more of the branches of the veins become obsolete. In the greater number of the species the first and second branches of the postcostal vein are present, although very short, and running into the costal vein, instead of continuing detached and extending to the costa beyond the extremity of the costal vein. In *P. Otrere*, &c., in which this structure occurs, we, however, find a very minute oblique branch extending (at about the distance of two thirds of the length of the wing from the base) between the costa and the costal vein; whence we may infer that this little branch is typically to be regarded as the termination of the costal vein, and that the apparent continuation of the costal vein is, in fact, the coalesced condition of the extremity of the first and second branches of the postcostal vein, which had also run together for some distance united with the costal vein. In the species now under consideration we find the postcostal vein throwing off another branch at some little distance beyond the middle of the wing; and we also find another minute oblique twig extending between this third branch and the continuation of the costal vein beyond the first above-described little branch. Here, again, we must consider that this second little branch is the extremity of the real third postcostal branch, which has arisen and run for a short distance in conjunction with the branch which we see, and which must, in such case, be considered as the real fourth branch.

In *P. Portia* and *Halice*, &c., we find only one branch emitted from the postcostal vein before the anterior extremity of the discoidal cell, the second branch being obsolete. In the first of these species we further find two branches emitted by the postcostal vein considerably beyond the cell, which are evidently the representatives of the third and fourth branches, although the first of these is extremely short, extending obliquely only between the postcostal and costal veins, which it unites together. The reverse of this arrangement takes place in both sexes of *Halice*, the first branch emitted beyond the discoidal cell throwing off a little oblique spur, as in *Otrere*, which we are consequently to regard as the representative of the third, and the branch which runs to the tip of the wing as the ordinary fourth branch of the postcostal vein. In a fine new species in the British Museum Collection, which I have named *P. Xenocrates*, another variation of these branches takes place, the postcostal vein emitting two branches before the extremity of the discoidal cell. But here the first branch only runs into the costal vein, which, being abbreviated, allows space for the second branch to extend nearly to the tip of the wing, where it is united to the costa; beyond the discoidal cell, however, the postcostal vein emits only one branch, which extends to the tip of the wing, so that there is here reason to suppose that the typical third branch is obsolete. I have been particular in distinguishing these variations, as they are the most striking which have yet presented themselves in the genera of Nymphalidæ which I have had to describe, and as they are very instructive in their application to other modifications which we shall have subsequently to notice.

Stoll has represented the Caterpillar and Chrysalis of *P. Leonidas*, which is black and thickly covered with short bristles arising from a number of minute white dots or tubercles. The head is large and square with small spinous tubercles on the top and sides. The chrysalis is short, without angular projections, of a pale greyish brown colour with red spots and markings, and is found suspended by its tail from the twigs of the shrubs upon which the caterpillar had fed.

The same author has also represented the Caterpillar of *P. Polycarnes*, which is more elongate, greenish, with black transverse striæ, four spots on the face, and the ventral surface reddish; the head is armed with two small conical horns, which, as well as the sides of the head, are minutely tubercled; and each segment of the body is furnished with a small lateral tuft of bristles, as well as a strong setose bristle on the top of the back. The anal pair of feet are large and divergent.

Mr. Gosse has published some notes on the mode of flight of *P. Portia* in the *Annals of Natural History* (2d ser. vol. ii. p. 270.).

The species, which are numerous, may be divided into sections, as indicated above, in the following manner:—

PAPHIA.

1. *Fore Wings without a deep incision or emargination near the extremity of the inner margin.* (*Anaea Hübner.*)

* *Postcostal vein of the Fore Wings with only one branch preceding the anterior extremity of the discoidal cell; second branch obsolete.*

† *Terminal branch of the postcostal vein of the Fore Wings arising near the tip of the wings.*

‡ *Fore Wings scalloped.*

1. PAPH. PORTIA.

Papilio Portia Fabricius, Ent. Syst. iii. pt. 1. 78. n. 242.;
Godart, Enc. M. ix. p. 364. n. 50.

Jamaica, Antilles.

B. M.

‡‡ *Fore Wings entire.*

2. PAPH. TROGLODYTA.

Papilio Troglodyta Fabricius, Ent. Syst. iii. pt. 1. p. 77.
n. 240.; Godart, Enc. M. ix. p. 365. n. 51. (Nymphalis Tr.).

Anaea Troglodyta Hübner, Verz. bek. Schm. n. 445.

Papilio Astianax Cramer, Pap. t. 337. f. A.B.

Papilio Astina Fabricius, Ent. Syst. iii. pt. 1. p. 81.
n. 251. ?; Jones, Icones, v. t. 80. f. 1. ?; Godart, Enc.

M. ix. p. 359. n. 30. ? (Nymphalis Ast.).

Hamadryas undata Astina Hübner, Samml. exot. Schm.

Band i. pl. —.

Jamaica.

B. M.

3. PAPH. AIDEA.

Nymphalis Aidea Guérin, Icon. R. An. Entomol. p. 478.
Bay of Campeachy.

†† *Terminal branch of the postcostal vein of the Fore Wings arising at a little distance beyond the middle of the wings.*

4. PAPH. HALICE.

Nymphalis Halice Godart, Enc. M. ix. p. 366. n. 55.;
E. Doubleday, List Lep. Brit. Mus. p. 113. (Paphia H.).

Anaea Halice Hübner, Zutrage, pt. 5. p. 41. f. 967, 968.
Brazil. B. M.

** *Postcostal vein of the Fore Wings with two branches preceding the anterior extremity of the discoidal cell.*

† *Hind Wings with one tail in both sexes, or in the female.*

5. PAPH. RYPHEA.

Papilio Ryphea Cramer, Pap. t. 48. f. G. H.; Godart, Enc.

M. ix. p. 365. n. 52. (Nymphalis R.).

Anaea Riphea Hübner, Verz. bek. Schm. n. 448.

Brazil, Guayaquil, Guiana.

B. M.

6. PAPH. PHIDILE.

Anaea Phidile Hübner, Zutrage, pt. 5. p. 27. f. 905, 906.

Paph. Ryphea fem. E. Doubleday, List Lep. Brit. Mus.

p. 113.

Brazil.

B. M.

7. PAPH. NESSUS.
Nymphalis Nessus *Latreille in Humboldt & Bonpl. Obs. Zool.* II. p. 76. pl. 35. f. 5, 6.
Nymphalis Nesea *Godart, Enc. M.* ix. p. 365. n. 53.
Peru.
8. PAPH. HELIE.
Papilio Helie *Clerck, Icones*, t. 34. f. 5, 6.
Nymphalis Helie *Godart, Enc. M.* ix. p. 365. n. 54.
America. B. M. ?
9. PAPH. VERTICORDIA.
Anaea Verticordia *Hübner, Zutrage*, pt. 3. p. 35. f. 559, 560.
Antilles.
10. PAPH. GLYCERIUM.
Paphia Glycerium *E. Doubleday MS.; Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 50. f. 1. (male.)
Mexico. B. M.
11. PAPH. XENOCLES *Westw. nov. sp.**
Paph. Appias *E. Doubleday, List Lep. Brit. Mus.* (but not of Hübner, which has the inner margin of the fore wings deeply emarginate).
Bolivia. B. M.
†† Hind Wings with two tails.
12. PAPH. ELECTRA *Boisd. MS. nov. sp.†*
Vera Cruz. B. M.
††† Hind Wings not tailed.
13. PAPH. XENOCRATES *Westw. nov. sp.‡*
Bolivia. B. M.
- II. Fore Wings with a deep incision or emargination near the extremity of the inner margin.
* Hind Wings tailed (Anaea Hübner, continued).
14. PAPH. ERIBOTES.
Papilio Eribotes *Fabricius, Ent. Syst.* III. pt. 1. p. 73. n. 229.; *Donovan, Ins. of India*, pl. 33. f. 3.; *Godart, Enc. M.* ix. p. 366. n. 57. (Nymphalis Er.).
Papilio Leonidas *Cramer, Pap.* t. 388. f. C. D. E. F.; *Stoll, Suppl. Cram.* pl. 6. f. 2. A. B. (larva and pupa).
Anaea Leonida *Hübner, Verz. bek. Schm.* n. 447.
Guiana.
15. PAPH. OCTAVIUS.
Papilio Octavius *Fabricius, Ent. Syst.* III. pt. 1. p. 73. n. 228.; *Jones, Icones*, v. t. 101. f. 1.; *Donovan, Ins. of India*, pl. 29. f. 2.; *Godart, Enc. M.* ix. p. 368. n. 61. (Nymphalis Oct.).
South America.
16. PAPH. MORVUS.
Papilio Morvus *Fabricius, Ent. Syst.* III. pt. 1. p. 73. n. 227.; *Godart, Enc. M.* ix. p. 367. n. 60. (Nymphalis M.).
Papilio Arachne *Cramer, Pap.* t. 48. f. A. B.
Anaea Acidalia *Hübner, Verz. bek. Schm.* n. 449.
Brazil, Cayenne.
17. PAPH. LAERTES.
Papilio Laertes *Fabricius, Ent. Syst.* III. pt. 1. p. 73. n. 226.; *Cramer, Pap.* t. 73. f. C. D.
Nymphalis Laertia *Godart, Enc. M.* ix. p. 367. n. 59.
Anaea Laertias *Hübner, Verz. bek. Schm.* n. 446.
Brazil, Columbia, Guiana. B. M.
18. PAPH. PHILUMENA.
Paphia Philumena *E. Doubleday MS.; E. Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 50. f. 2.
Bolivia. B. M.
19. PAPH. IPHIS.
Nymphalis Iphis *Latreille in Humboldt & Bonpl. Obs. Zool.* p. 80.
Nymphalis Thamyras *Latreille, op. cit.* pl. 36. f. 2.; *Griffith's Animal Kingd. Ins.* pl. 79. f. 1.
Peru.
20. PAPH. OTRERE.
Anaea Otrere *Hübner, Zutrage*, pt. 3. p. 8. f. 407, 408.
Brazil.
21. PAPH. ARGINUSSA.
Corycia Arginussa *Hübner, Zutrage*, pt. 4. p. 26. f. 705, 706.
Brazil.
22. PAPH. APPIAS.
Corycia Appias *Hübner, Samml. exot. Schmett.* Band II. pl. —.
Brazil. B. M.
23. PAPH. PLEIONE.
Nymphalis Pleione *Godart, Enc. M.* ix. p. 366. n. 56.
Antilles.
** Hind Wings not tailed (Memphis Hübner).
24. PAPH. BASILIA.
Papilio Basilia *Cramer, Pap.* t. 329. f. C. D.
Memphis Basilia *Hübner, Verz. bek. Schm.* n. 451.
Paphia Morvus fem. *E. Doubleday, List Lep. Brit. Mus.* p. 113.
Surinam. B. M.
25. PAPH. POLYCARMES.
Papilio Polycarmes *Fabricius, Ent. Syst.* III. pt. 1. p. 153. n. 472.; *Godart, Enc. M.* ix. p. 367. n. 58. (Nymphalis Pol.).
Papilio Odilia *Cramer, Pap.* pl. 329. f. C. D.; *Stoll, Suppl. Cram.* pl. 6. f. 3. 3 C.
Memphis Odilia *Hübner, Verz. bek. Schm.* n. 450.
Cayenne, Surinam.
26. PAPH. PASIBULA.
Paphia Pasibula *E. Doubleday MS.; E. Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 50. f. 3.
Venezuela. B. M.

* Alis supra chalybæo-nigris, omnibus dimidio interno viridi-cæruleis, anticis apice subfalcatis, margine interno integro, maculis quinque parvis viridi-cæruleis, 1ma pone medium et versus costam posita, et 4 subapicalibus, duabus approximatis; alis posticis breviter caudatis serie submarginali punctorum parvorum alborum, internis nigro subocellatis; alis subtus porphyreo-nitidis, griseo nigroque irroratis, posticis punctis parvis albis et nigris. Exp. alar. antic. unc. $2\frac{3}{4}$.

† Alis anticis valde falcatis, margine interno integro, luteo-albidis margine postico irregulari fusco; alis posticis cauda spatulata media alteraque breviori ad angulum analem, magis lutescentibus margine tenuiori fusco; omnibus subtus fuscis albo-irroratis argenteoque nitidis, strigis nebulisque obscurioribus punctoque albo versus medium costæ posticarum; palpis longioribus et magis porrectis. Exp. alar. unc. 3.

Obs. This new species has much the appearance of *Hypna Clytemnestra* in the form of the fore wings and the bicaudate hind wings. It, however, possesses only three branches to the postcostal vein of the fore wings, the fourth being obsolete, and the third arising at a little distance beyond the anterior extremity of the discoidal cell, and reaching nearly to the tip of the costa without being depressed near its extremity; the hind wings also have the space between the two tails quite straight and wide, the inner tail being traversed by the submedian vein, instead of the first branch of the median, as in *Clytemnestra*. The specimen in the British Museum is a male with very minute fore legs.

‡ Paphia corpore crasso alis integris nigris, omnibus basi margineque lato anali posticarum cæruleo-nitidis; anticis maculis 4 pallide cærulescentibus pone medium, subcostali majori ovali; posticis limbo cæruleo, angulo anali producto; subtus omnibus plumbeo-griseis nitidis, obscurius nebulosis nigroque piperatis. Expans. alar. antic. unc. $3\frac{1}{2}$.

Genus LXXXII. **SIDERONE** *Hübner, E. Doubleday.*SIDERONE, HISTORIS, NESSÆA, ZARETIS p. *Hübner.*NYMPHALIS p. *Godt.*

BODY robust; wings large; fore wings subemarginate at the hinder angle; anal angle of hind wings generally tailed; wings underneath obscurely marked, somewhat resembling a withered leaf.

HEAD of moderate size, clothed with short thick hairs, slightly tufted in front.

Labial Palpi large, obliquely porrected as far as the entire length of the head, obtusely pointed at the tip, which is elevated as high as the top of the eyes; front broad, scaly; hind surface clothed in the middle with short hairs applied to the face.

Eyes large and naked.

Antennæ short, not more than two fifths of the length of the fore wings, gradually thickening from about two thirds of the length and forming a long but slender club, rather obliquely truncate at the tip, and finely carinated beneath.

THORAX robust, woolly; metathorax clothed with longer woolly hairs.

Fore Wings large, subovate. Anterior margin strongly rounded; apex more or less produced. Apical margin rather more than two thirds of the length of the anterior, very convex in some of the species. Inner margin of the same length as the apical, and more or less emarginate at the inner angle. Costal vein extending nearly to two thirds of the length of the costa. Postcostal vein emitting its first and second branches before the anterior extremity of the discoidal cell; these two branches extending to the costa, beyond the extremity of the costal vein; third branch emitted at a little distance beyond the anterior extremity of the discoidal cell; fourth branch arising at a little distance beyond the third, and extending to the tip of the wing; terminal portion of the postcostal vein extending to the apical margin below the tip. Upper disco-cellular vein arising from the postcostal at the distance of two fifths of the wing from the base, short, oblique; middle disco-cellular vein of nearly equal length, but more transverse; lower disco-cellular vein much longer, rather curved, uniting with the third branch of the median vein at a little distance beyond its origin; this third branch considerably curved beyond the posterior extremity of the discoidal cell.

Hind Wings large, subovate-triangular, with the costal margin much arched at the base; the outer angle dilated. Outer margin rounded; anal angle generally dilated into a tail. Precostal vein short, slender, oblique, and slightly curved outwardly at the tip. Postcostal vein branching at a little distance beyond its base. The discoidal cell closed by an oblique, very slender vein, arising at a short distance from the base of the discoidal vein, and uniting with the median vein exactly at the origin of its third branch. Submedian vein extending into the tail, above which the inner margin is deeply emarginate. The males have the tail less developed than the females.

Fore Legs of the male of *S. Isidora* small, pectoral, and very slender, hirsute, but not forming a strong brush. Femur with the hairs set on at right angles on the inside. Tibia scarcely two thirds of the length of the femur. Tarsus nearly as long as the tibia, quite simple and exarticulate. *Fore Legs* of the female of *S. Ide* short, but robust, scaly. The tibia a little shorter than the femur. Tarsus shorter than the tibia, rather dilated, and obliquely truncate at the tip, with several pairs of minute spines indicating the articulations.

Four Hind Legs short, robust. Femur nearly as long as the tibia and tarsus united, scaly. Tibia armed beneath with two rows of strong spines; tibial spurs strong. Tarsus short, scaly, armed beneath with four rows of spines, except on the terminal joint. Paronychia minute. Claws strong.

ABDOMEN robust, oval.

This is a genus of handsome butterflies of moderate size, agreeing with *Paphia* in the incision at the extremity of the inner margin of the fore wings, the tailed condition of the hind wings, and the indistinct character of the markings on the under side of the wings. From that genus they differ, however, in the porrected palpi, the normal condition of the branches of the postcostal vein (at least in *S. Ide*, which has supplied the characters given above), and in the tail of the hind wing being produced at the anal angle, and not in the middle of the hinder margin. *S. Ide* and *Galanthus* are remarkable for the brilliant carmine colour of the basal half, and a large oblique bar beyond the middle of the fore wings, which splendidly contrasts with the black ground-colour of the upper surface of the wings; whilst the under surface is remarkably mottled with various tints, giving the wings much the appearance of withered leaves. The species are natives of the hottest parts of the New World. A manuscript note attached to the specimen of *S. Zethus Westw.* in the British Museum collection states that it is only seen in bright hot days, and that it keeps its position on a leaf day after day, darting up at other insects as they fly past its seat.

Siderone Itys, *Isidora*, and several other species, differ from the type, *S. Ide*, in having the fore wings more strongly hooked at the tip, and in having the hind wings not so broadly caudate at the anal angle, whilst the costal margin preceding the outer angle is more or less emarginate. These species also exhibit a peculiar character which requires further examination. This consists of two small

rounded tale-like spots in the middle of the disc of each of the fore wings, behind the dark patch at the extremity of the discoidal cell. Godart describes them only in *S. Isidora*, and further states that it is only in the females that they occur. The British Museum collection, however, possesses a series of *S. Isidora* in which every specimen, both male and female, is marked with these tale-like spots. The same collection possesses two female specimens agreeing tolerably well with Cramer's figure of *S. Itys*, one of which has two similar spots, whilst the other is destitute of them. Their place, however, is occupied by two pale patches covered with scales, having a dusky anterior margin. The same collection contains a fine male specimen from Para, distinct from *S. Isidora* and *Itys*, with the wings, on the upper side, of a rich fulvous red, with the tips and a spot in the middle of the costa black, which also exhibits the two vitreous spots. Another species in the same collection, which I have named *S. Itylus*, has the upper surface of the wings entirely of a dark rich red brown colour, without the slightest indication of the vitreous spots. The fore legs are unfortunately wanting, but the specimen appears to be a female.

SIDERONE.

1. SIDERONE IDE.

Siderone Ide Hübner, *Samml. exot. Schm.* Band ii. pl. —; *Boisduval*, *Sp. Gen. Lepidopt.* pl. 8. f. 1.; *E. Doubleday*, *List Lep. Brit. Mus.* p. 113.

Nymphalis Rogerii Godart, *Enc. M.* ix. p. 371. n. 73.; *Lucas*, *Hist. Nat. Lep. exot.* t. 67. f. 1.

Brazil, St. Domingo, Cuba.

B. M.

2. SIDER. MARTHESIUS.

Papilio Marthesius Fabricius, *Ent. Syst.* iii. pt. 1. p. 153. n. 469.; *Cramer*, *Pap.* pl. 191. f. A. B.; *Godart*, *Enc. M.* ix. p. 371. n. 72. (*Nymphalis M.*); *Hübner*, *Verz. bek. Schm.* n. 307. (*Historis Marth.*) [An var. *S. Ide*?]

Guiana.

3. SIDER. GALANTHIS.

Papilio Galanthus Fabricius, *Gen. Ins. Mant.* p. 257., *Ent. Syst.* iii. pt. 1. p. 46. n. 142.; *Cramer*, *Pap.* pl. 25. f. D. E.; *Godart*, *Enc. M.* ix. p. 422. n. 228. (*Nymphalis Gal.*); *Hübner*, *Verz. bek. Schm.* n. 362. (*Nessæa Gal.*).

Surinam.

4. SIDER. ISIDORA.

Papilio Isidora Cramer, *Pap.* t. 235. f. A. B. E. F.; *Fab. Ent. Syst.* iii. pt. 1. p. 78. n. 244.; *Donovan*, *Ins. of India*, pl. 33. f. 4.; *Godart*, *Enc. M.* ix. p. 371. n. 17. (*Nymphalis Isid.*).

Zaretis Isidora Hübner, *Verz. bek. Schm.* n. 452.

Brazil to Mexico.

B. M.

5. SIDER. ITYS.

Papilio Itys Fabricius, *Spec. Ins.* ii. p. 60., *Ent. Syst.* iii. pt. 1. p. 73. n. 230.; *Cramer*, *Pap.* pl. 119. f. F. G.; *Godart*, *Enc. M.* ix. p. 370. n. 70. (*Nymphalis Itys*); *Hübner*, *Verz. bek. Schm.* n. 298. (*Apatura Itys*); *Doubl. Westw. & Hewitson*, *Gen. Diurn. Lep.* pl. 53. f. 1. (*Siderone Itys*).

Surinam.

B. M.

6. SIDER. ITALUS Westw. nov. sp.*

Rio Janeiro.

B. M.

7. SIDER. ZETHUS Westw. nov. sp.†

Para.

B. M.

Genus LXXXIII. BIA Hübner.

MORPHO Godt., Guérin-Méneville.

BODY slender; wings large; fore wings with a large metallic spot; hind wings gradually produced into a tail at the anal angle.

HEAD rather small, finely hairy, with a small frontal tuft; neck narrow.

Eyes large, prominent, naked.

Labial Palpi rather long and slender; tip acute, obliquely elevated nearly to the level of the top of the eyes; second joint long, narrow, scaly, with a row of fine short hairs on the back, extending from the base to the tip, not forming a reflexed mass applied to the face; terminal joint short, slender, and acute at the tip.

Antennæ short (not near half the length of the fore wings), very slender, curved; the club very slender, gradually formed, and a little bent downwards, very finely carinated on the inside; articulations throughout very distinct.

THORAX small, oval, finely hairy.

Fore Wings very large (especially in the males), subtriangular. Anterior margin very much arched; apical angle rounded. Apical margin convex, about three fourths of the length of the anterior. Inner margin straight, a little longer than the apical. Costal, median, and submedian veins much swollen at the base, especially in the males. Costal vein extending a little beyond the middle of the costa; throwing off an additional branch, which joins the costa a little beyond its extremity. Postcostal vein throwing off a first branch close to the middle of the length of the wing, which joins the costa at about two thirds of its length

* *Siderone* alis omnibus supra fusco-ferrugineis; anticis fascia abbreviata angulata ad apicem cellulæ discoidalis apiceque lato fuscis, disco absque maculis vitreis, margine apicali convexo; posticis angulo externo acuto, margine integro; alis subtus griseo-brunneis, anticis ad apicem albo irroratis, posticis lineâ media obliqua obscura. Exp. alar. unc. $2\frac{2}{3}$.

† *Siderone* alis omnibus supra rufo-fulvis; anticis macula angulata ad apicem areæ discoidalis apiceque lato fusco, disco maculis duabus vitreis, margine apicali valde emarginato; alis posticis angulo externo subobtusato striga subrepanda subapicali fusca ante marginem analem evanescenti punctisque tribus minimis nigris versus angulum analem; subtus ferrugineo-griseis, posticis magis purpureis, striga transversa obscuriori. Exp. alar. fere unc. $2\frac{1}{2}$. An mas *S. Ityli*?

from the base; a short oblique veinlet connects this first branch with the costal vein, previous to the junction of the latter with the costa. The postcostal vein throws off two other branches only, at the same distances apart as exists between the anterior extremity of the discoidal cell and the first of these two branches; the second of which arises at about three fourths of the length of the wing, and extends to the tip. The upper disco-cellular arises at half the length of the wing, and is rather oblique and short; the middle disco-cellular is rather longer and curved; and the lower disco-cellular is very much longer, very oblique and curved (so that the posterior extremity of the discoidal cell is very acute, and reaches nearly two thirds of the length of the wing), uniting with the third branch of the median vein at a considerable distance from its origin; this third branch being angulated at the point of junction, its extremity being straight, or but little curved.

Hind Wings large, elongate-triangular. Costal margin very much arched at the base; outer angle rounded. Outer margin nearly straight, extending at the anal angle into a gradually formed tail, which is most developed in the males; which sex is further distinguished by a tuft of long pale buff hairs near the anal margin, capable of being raised and depressed at will, and enclosed, when at rest, in an elongated pouch; and also by a patch of long black silky hairs on the upper disk of the hind wings, near the costal margin. Precostal vein branched; the fore branch nearly straight, and slightly dilated at the tip; hind branch united to the costal vein, leaving a small narrow cell between the base of the costal and precostal veins; the postcostal vein branching at a little distance from its base. Anterior disco-cellular very short, forming the base of the discoidal vein; outer disco-cellular very long, bent at a right angle near its base, and throwing off a branch at the angle directed towards the base of the wing; the extremity of the outer disco-cellular extending considerably beyond the middle of the wing, and closing the discoidal cell at a right angle. First branch of the median vein extending to the tip of the tail. The submedian vein extending rather beyond the middle of the anal margin.

Fore Legs of the male small, pectoral, and very slender, hairy, forming a slight brush. Femur considerably shorter than that of the female, hairs set on at right angles. Tibia about two thirds as long as the femur. Tarsus as long as the tibia, very slender and simple. *Fore Legs* of the female nearly half the length of the hind legs, slender, scaly. Tibia about two thirds of the length of the femur. Tarsus shorter than the tibia, rather widened to the tip, which is obliquely truncate, with several minute spines in the truncation, indicating the articulations.

Four Hind Legs rather long. Tibiæ and tarsi with long spines beneath. Paronychia small.

The type of this genus is a rather small, but very interesting, butterfly, the male of which is represented in our Pl. LIII. fig. 4.; the female, however, contrary to the general custom in these insects, is more brilliantly coloured than the male, a large patch of the most brilliant blue occupying nearly the whole of the basal half of the fore wings; the under surface of the wings in both sexes is strongly marked all over with minute red-brown transverse streaks on a paler ground, like the plumage of many birds; on the under side, the fore wings have also a minute black eyelet near the apical margin, between the two discoidal veins, and the hind wings have three very small blind brown eyelets near the costal margin. The patch of long black hairs on the upper side of the hind wings, near the costal margin, has a corresponding naked patch on the under side of the fore wings, close to the inner margin; and the pale hairs, forming the large patch near the anal margin, are planted upon the ridge of a longitudinal fold of the wing, which is traversed by about a dozen transverse raised striæ, the hairs being inserted within these striæ, leaving naked spaces between them, so that, by extending the muscle of the veins of the wing, these striæ are pulled into a flat surface, and the hairs, implanted at right angles, then form an erect brush; when the muscle is relaxed, however, these hairs fall into a longitudinal direction, and are then dropped *en masse*, by another muscular movement, into a deep groove at the inside of the ridge.

The veins of the fore wing offer a peculiar arrangement, which is worthy of attention. The costal vein appears forked at its extremity, the outer branch of the fork reaching the costa a little beyond the inner branch; there are only three apparent branches of the postcostal vein, but there is a little oblique veinlet between the first branch and the costal vein. Now, theoretically speaking, we are to consider this little veinlet as the real first branch of the postcostal vein, and the apparent first branch, from which it springs, as the real second branch; in such case, we must consider the base of this little veinlet as having arisen in the postcostal, just before the apparent first branch, and as having run in a coalesced condition with it for a short distance. We are, moreover, to consider that the apparent outer fork of the costal vein is in effect the extremity of this little veinlet, which has coalesced for a short distance with the costal vein, and then branched off from it, uniting with the costa exactly where the normal first branch of the postcostal vein would have done.

The dilated condition of the base of the principal veins of the fore wings in both sexes, the great elongation of the discoidal cell of the fore wings, and the little cell formed at the base of the costal vein of the hind wings, as well as the slenderness of the limbs of the type of this genus, are considerably at variance with the typical characters of the present family, and might, at first sight, seem to warrant its removal to the family Satyridæ, to some of the most aberrant groups of which, as *Corades* and *Hætera*, it may perhaps be proved to be most nearly allied. The form of the hind wings, however, and the patches of elongated hairs with which they are adorned in the males, together with the metallic patches on the fore wings, and the oblique pale bar beyond the middle of the fore wings in the females, seem to indicate a decided affinity with the insects of the preceding, and especially the few following genera.

The only known species is a native of the hottest parts of the New World, where it frequents thick woods, flying slowly, as indicated by the weak structure of its wings, which it keeps closed when at rest. Nothing is known of its transformations.

BIA.

1. BIA ACTORION.

Papilio Actorion Linnaeus, *Syst. Nat.* ii. p. 794. n. 262.;
Clerck, *Icon.* t. 36. f. 3, 4.; Cramer, *Pap.* t. 49. f.
C. D.; Godart, *Enc. M.* ix. p. 446. n. 21. (Morpho
Act.); Hübner, *Verz. bek. Schm.* n. 475. (Bia Act.);

Guérin, *Icon. R. An. Ins.* pl. 79. f. 2. (Morpho Act.);
Doubl. Westw. & Hewitson, *Gen. Diurn. Lep.* pl. 53.
f. 4. (male).

Brazil.

B. M.

Genus LXXXIV. HETEROPSIS.

HETEROPSIS *Boisduval MS.*

BODY small, finely hairy; fore wings large, veins swollen at the base, apex acuminate-caudate; hind wings entire. **HEAD** moderate-sized, with a conical tuft of hairs in front.

Eyes large, very hairy.

Labial Palpi long, slender, obliquely porrected, rather wide apart, and raised to the level of the top of the eyes, clothed with short hairs, especially on the inside and beneath; the back of the long middle joint not clothed with a conical tuft of hairs resting on the face; third joint small, slender, and pointed.

Antennæ not half the length of the fore wings; terminated by a gradually formed, rather thick, elongate-ovate club, composed of only twelve or fourteen joints, rather pointed at the tip, and finely carinated beneath.

THORAX small, oval, finely hirsute.

Fore Wings large. Anterior margin strongly arched from the base to three fourths of its length, whence it is concave to the tip, which is produced into an obtuse tail. Apical margin nearly two thirds of the length of the anterior, emarginate below the apex; the hinder part slightly convex. Inner margin one eighth longer than the apical, dilated between the base and the middle. Costal vein dilated at its base, joining the costa before the middle. Postcostal vein slender, with its branches normal; the first and second arising before the anterior extremity of the discoidal cell; the third branch arising at about five eighths of the length of the wing; fourth branch arising at about three fourths of the length, and reaching to the anterior extremity of the produced apex; the terminal portion of the vein extending to its posterior extremity. Anterior disco-cellular arising at the middle of the length of the wing, short, transverse: middle disco-cellular twice the length of the anterior, suboblique, but rather directed inwards towards the base of the wing: outer disco-cellular rather longer than the middle, angulated close to its anterior extremity; a slender branch extending from the angle into the discoidal cell; beyond this angle it is directed rather obliquely outwards, but does not extend beyond the middle of the wing; uniting with the third branch of the median vein at some distance from the base of the latter, which is angulated at the point of junction, its extremity being but little curved, so that the discoidal cell is closed, being broad, and reaching to the middle of the wing. Median and submedian veins dilated at the base.

Hind Wings broad, subtriangular. Outer margin rounded, entire. Costal margin much arched near the base; outer angle somewhat dilated. Precostal vein slender, slightly curved outwards. Costal vein arising close to the base of the precostal, extending only to the middle of the costal margin. Postcostal vein branching at one third of its length. Anterior disco-cellular long, nearly transverse, slightly angulated near its extremity; outer disco-cellular of the same length, transverse, nearly straight, uniting with the median vein at the base of the third branch, closing the discoidal cell in an acute point; this third branch curved.

Fore Legs of the male slender, very small, very densely setose. Tibia nearly as long as the femur. Tarsus two thirds of the length of the tibia. (Female unknown.)

Four Hind Legs slender. Tibial spurs short; tibiae scarcely spinose beneath. Tarsi slender, finely spined beneath. Claws small. Paronychia very small.

ABDOMEN small, oval.

We are again indebted to Dr. Boisduval, for the communication of his unique specimen of the male of this remarkable little butterfly, which, in the dilated condition of the veins of the fore wings, approaches *Bia Actorion*, whilst in the acuminate extremity of the fore wings it resembles *Siderone*, and some of the following groups; the large size of the discoidal cell, closed in all the wings, and the abbreviated condition of the costal vein of the hind wings, as well as the hairy eyes, are characters worthy of notice, as well as the slenderness of the limbs and palpi. The peculiarity of the markings of the species also merits attention, as they bear little relation to those of the *Satyridæ*, with which family the small size and dull colours of the species might seem to indicate a relation. In addition to the round black spot between the first and second branches of the median vein, there is a very minute white dot on the upper sides, *between the two discoidal veins*, toward the apical margin, exactly corresponding with the centre of the largest of the row of small white spots seen on the under side of the fore wings, extending to the tip; there is also a curved row of seven small white dots on the under side of the hind wings, half way between the middle and the outer margin.

HETEROPSIS.

1. HETEROPSIS *DREPANA* nov. sp.*

Heteropsis Drepana Boisduval MS.; Doubl. Westw. & Hewits. Gen Diurn. Lep. pl. 63. f. 5. Madagascar.

* *H. alis supra fuscis, anticis ocello parvo nigro pupilla alba punctoque albo pone medium; subtus pallidioribus, fulvo-brunneis griseo nigroque irroratis: anticis obscurius nebulosis serieque apicale macularum sex parvarum albarum; posticis fascia indistincta media fusca punctisque septem albis inter medium et marginem posticum positis. Expans. alar. antic. unc. fere 2.*

December 2. 1850.

Genus LXXXV. **KALLIMA** *E. Doubleday MS.**PAPHIA* *Horsfield, Hugel.**AMATHUSIA* *Boisduval MS.; Westwood & E. Doubleday, olim.**NYMPHALIS* *p. Godt.*

BODY robust; fore wings large, generally acute at the tip; hind wings gradually produced into a tail at the anal angle; all the wings traversed across the middle beneath by a straight dark-coloured line.

HEAD large, densely squamose, with a large rounded tuft of scaly hairs in front.

Eyes large, naked, and prominent.

Antennæ scarcely more than two fifths of the length of the fore wings, nearly straight; terminated by a gradually formed slender club, scaly above, finely carinated beneath, rounded off obliquely beneath.

Labial Palpi large, porrected obliquely at least to the level of the top of the eyes, and advanced in front of the face to at least the length of the head; forming conjointly an elongate conical beak in front, densely scaly to the tip, the scales concealing the articulations; with a coat of hairs on the back of the middle joint, applied to the face.

THORAX elongate-ovate, very scaly.

Fore Wings large, subtriangular. Fore margin very much rounded, slightly emarginate near the base; apical angle more or less acute and produced. Apical margin five sixths of the length of the anterior, concave below the apex, but more or less concave or subangulated towards the posterior angle (especially at the extremity of the first branch of the median vein). The costal vein extends to the middle of the costa. Subcostal vein with two branches arising before the anterior extremity of the discoidal cell; each free, and extending to the costa; third branch arising beyond the extremity of the discoidal cell, and extending to the tip of the wing; fourth branch arising at about five sixths of the length of the wing, and extending to the apical margin below the apex. Upper disco-cellular vein very short, almost obsolete; middle disco-cellular short, slightly curved, and rather oblique, being directed towards the base of the wing; outer disco-cellular distinct in *K. Paralekta*, but slender, curved rather obliquely, the curve being towards the base of the wing, and uniting with the median vein just beyond the origin of its third branch, which is very much arched. The anterior extremity of the discoidal cell reaches just one third of the length of the fore wing, and its posterior extremity is somewhat shorter.

Hind Wings elongate, subtriangular. Costal margin much arched at the base. Outer margin rounded; anal angle gradually produced into a tail, which is traversed by the submedian vein. Precostal vein oblique, curved outwardly at the tip. Costal vein extending to the outer angle. Postcostal vein branching nearer the base than the median vein. Discoidal cell closed (in *K. Paralekta*) by a curved outer disco-cellular vein, rather before the middle of the wing.

Fore Legs of the male small, pectoral, moderately hairy, but not forming a dense brush, slender. Tarsus about two thirds of the length of the tibia, simple, exunguiculate. *Fore Legs* of the female longer than those of the male (especially the tarsus), slender, scaly. Femur with a row of short hairs on the inside, set on at right angles. Tarsus nearly as long as the tibia, dilated at the tip, the inside of which is obliquely rounded off, and armed beneath with four pairs of short spines, indicating the articulations at the extremity; terminal joint very minute and simple.

Four Hind Legs moderately long, not very robust. Tibiæ with two rows of very short spines beneath; tibial spurs short. Tarsi armed beneath with four rows of small spines. Ungues slender, very much curved.

ABDOMEN moderately robust, oval.

Like *Bia* and *Amathusia*, the species of this genus have each of the hind wings produced into a tail at the anal angle; whilst the fore wings, as in *Siderone* and *Heteropsis*, have the apical angle more or less acuminate. This is especially the case with some specimens of *K. Paralekta*, whilst in *K. Eurodoce* the fore wings are quite hooked at the tip; in *K. Bisaltide*, however, they are subtruncate at the tip. I have united into this genus several species possessing a general similarity of form, as well as agreeing in having a straight dark-coloured line running across all the wings on the under side, extending from the tip of the fore wings to the anal angle of the hind ones; although it is very singular that these species exhibit so great a difference in the arrangement of the wing veins, that some of them have the discoidal cell in all the wings closed, whilst in others it is equally open in all the wings.

I have regarded *K. Paralekta* as the type of the genus, and have accordingly derived from it the majority of the generic characters given above. *K. Bisaltide*, however, differs from the type not only in the open condition of the discoidal cell in all the wings, but also in the shorter labial palpi, and the truncate form of the tip of the fore wings.

I am indebted to Dr. Horsfield for a specimen of the chrysalis skin of *K. Bisaltide*, reared by him in Java. The specimen has unfortunately lost the head-case, so that I am unable to state whether it is boat-shaped and bifid, as the chrysalis of *Amathusia Phidippus* appears to be, from Dr. Horsfield's figure of it, subsequently referred to. The thorax-case is produced along the middle, on the upper side, into a conical ridge, and the cover of the base of the inner margin of each of the fore wings is also produced into a rounded prominence; the abdomen-case has no conical or other protuberances. The entire surface of this chrysalis is covered with a multitude of minute striæ or wrinkles, which are dark-coloured on the wing-cases.

K. Bisaltide has the under surface of all its wings marked beyond the middle with a row of ocelli, three of which in the hind wings, and two near the anal angle of the fore wings, are the most conspicuous, the others being often more or less obsolete. K. Paralekta and some other species are destitute of these ocelli, but have the under side of the wings of a greyish red-brown colour with darker shades, with the dark oblique line across the middle of all the wings very conspicuous, so that, when the insect is sitting at rest with its wings closed, it can with difficulty be distinguished from a withered leaf, the dark central line exactly representing the mid-rib of the leaf. This species seems to be subject to several geographical modifications, which have been regarded by Boisduval and Kollar as distinct species. The Himalayan specimens have the tips of the fore wings much more acute than the Javanese kind, as figured by Dr. Horsfield, and both sexes are marked with a vitreous spot in the middle of the wing, the general form and colouring of both males and females offering no material difference. Dr. Horsfield also represents the Javanese insect as having the talc-like spot; whereas the K. Horsfieldii of Kollar, and the female represented in our fifty-second plate under the name of Paralekta, have the wings destitute of this patch. The original Ceylon specimen of K. Philarchus, represented by me, possessed no talc-like spot, neither does it exist in a male specimen of the species now in my collection; but there are two specimens of the male in the British Museum collection, one of which has each of the fore wings marked with two very conspicuous vitreous spots. Further observations, upon a more extended series of specimens than we now possess, will alone enable us to determine whether this be a real specific or casual character.

K. Paralekta has the third branch of the postcostal vein arising at a short distance beyond the extremity of the discoidal cell, which is closed by a slender, curved, outer disco-cellular vein in all the wings. K. Rumia, from Ashanti (Pl. LII. f. 2. male), has the fore wings not angulated at the tip, but the discoidal cell is closed in all the wings, as in K. Paralekta. The female of this species differs from the male in being larger, with the wings brown, and destitute of the purple gloss and fulvous patches, and in having the oblique central fascia broken up into a number of oval white spots, with a row of smaller spots of the same colour running to the tip of the wing; the hind wings are also marked with a large whitish transverse patch beyond the middle, beyond which are two indistinct ocelli.

K. Eurodoce is a new species from Madagascar, communicated by Dr. Boisduval, remarkable for the very hooked form of the fore wings; the under side is ferruginous, with darker shades and lilac irrorations traversed by a curved dark line. The discoidal cell of all the wings is closed by a very delicate curved outer disco-cellular vein.

The Eastern K. Bisaltide is entirely destitute of metallic gloss, and has the discoidal cell in all the wings open; the outer disco-cellular vein of the fore wings being reduced to an almost indistinct spur at the end of the middle disco-cellular. K. Cymodoce has also the discoidal cell of all the wings open. This species is remarkable for the rich tints of the basal half of the wings in both sexes, the male being of a splendid blue, whilst the female is of a more purple tint; the latter having moreover an oblique, entire, dull whitish-buff fascia, between the middle and apex of the fore wings.

KALLIMA.

1. KALL. PARALEKTA.

Paphia Paralekta Horsfield, *Descr. Cat. Lep. East Ind. Comp.* t. 6. f. 4.; *E. Doubleday, List Lep. Brit. Mus.* p. 114. (*Amathusia* P.).

Java.

2. KALL. INACHIS.

Amathusia Inachis Boisduval in *Cuvier's Règne Animal*, ed. Crochard, *Ins.* pl. 139. f. 3.; *Herrick Schaffer, Samml. neu. auss. Schm.* f. 7, 8.

Paphia Hugelii Kollar in *Hugel's Reise nach Kaschmir*, &c. ii. p. 432. pl. ix.

Paphia Paralekta Royle, *Illustr. of Himalaya*, pl. 10. f. 3a, 3b.

Paphia Paralekta var. *Westwood, Cab. Orient. Entomol.* p. 56. note.*

Himalaya, Cashmir, Missoori, Simlah, &c.

B. M.

3. KALL. HORSFIELDII.

Paphia Horsfieldii Kollar in *Hugel's Reise nach Kaschmir*, &c. ii. p. 434. t. x.

Kallima Paralekta Doubl. *Westw. & Hewits. Gen. Diurn. Lep.* pl. 52. f. 3. fem.

Himalaya.

4. KALL. PHILARCHUS.

Amathusia Philarchus Westwood, *Cab. of Orient. Entomol.* p. 56. pl. 27. f. 4.

Ceylon.

B. M.

5. KALL. RUMIA.

Amathusia Rumia Boisduval MS.; *Doubleday, List Lep.*

Brit. Mus. p. 114.; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 52. f. 2.

Ashanti, Gold Coast.

B. M.

6. KALL. EURODOCE. nov. sp.*

Amathusia Eurodoce Boisduval MS.; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 54.* f. 1.

Madagascar.

7. KALL. CYMODOCE.

Papilio Cymodoce Cramer, *Pap.* t. 99. f. G.H.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 74. n. 231.; *Godart, Enc. M.* ix. p. 369. n. 67. (*Nymphalis Cym.*).

Ashanti, Guinea.

B. M.

8. KALL. BISALTIDE.

Papilio Bisaltide Cramer, *Pap.* t. 102. f. C.D.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 74. n. 232.; *Godart, Enc. M.* ix. p. 370. n. 69. (*Nymphalis Bisalt.*); *Hübner, Verz. bek. Schm.* n. 294. (*Apatura Bisalt.*); *E. Doubleday, List Lep. Brit. Mus.* p. 114. (*Amathusia Bis.*).

Papilio Polibetes Cramer, *Pap.* t. 234. f. D.E., t. 235. f. C.D.; *Hübner, Verz. bek. Schm.* n. 453. (*Zaretis Polib.*).

East India, Java, Penang.

B. M.

9. KALL. NACAR.

Amathusia Nacar Boisduval, *Voy. de l'Astrolabe, Entomol.* Ire part. p. 123.

New Guinea.

* *Kallima* alis anticis apice falcatis, supra fuscis, strigis angulatis nigris in area discoidali, fascia submarginali fulva, postice latiori, punctis tribus albis subapicalibus aliisque tribus nigris in fascia fulva, intermedia majori alboque pupillata; alis posticis caudatis bas fuscis pone medium fulvis, strigisque duabus submarginalibus, caudaque nigricantibus: alis subtus ferrugineis fusco-subnebulosis; strigisque undulatis in area discoidali anticarum, anticis ad marginem apicalem et posticis in medio, lilacino irroratis; omnibus striga fusca curvata ex apice anticarum, per medium alarum posticarum, ad caudam extensis, serieque communi submarginali punctorum alborum (nonnullis indistinctis). Exp. alar. antic. unc. 2.

Genus LXXXVI. **AMATHUSIA.***AMATHUSIA Fabricius, Syst. Gloss.**MORPHO p. Godt.**MÆRA Hübner, Verzeichniss bek. Schm.**THORÆSSA Boisduval MS.*

BODY rather small, very hairy; wings large; hind pair with two large ocelli, wide apart, on the under side, and with a short broad tail at the anal angle.

HEAD rather small, hairy, with a small, frontal, conical tuft of hairs; neck short.

Labial Palpi rather slender and compressed, porrected obliquely to about the length of the head, and raised at the tip nearly to the level of the top of the eyes, not united into a conical beak, scaly beneath; the back of the second and third joints hairy, the hairs of the middle joint being erect, and resting on the front of the face and side of the frontal tuft; terminal joint ovate-conic.

Antennæ about three sevenths of the length of the fore wings, slender, not straight; the joints very distinct. Club long, very gradually formed, and very slender, finely carinated beneath, articulations distinct, the terminal ones gradually acuminate.

THORAX ovate, very hairy, neither large nor robust.

Fore Wings large, elongate-triangular. Fore margin very much arched; apical angle rather rounded. Apical margin about two thirds of the length of the anterior, entire, slightly concave; inner angle rounded. Inner margin nearly straight, rather narrowed towards the base. Costal margin long, extending to two thirds of the length of the costa. Postcostal vein slender; the first branch nearly at the distance of one third of the wing from the base, extending to the costa at about three fourths of its length; second, third, and fourth branches arising close together, at about three fourths of the length of the wing; the second and third very short, joining the costa; the fourth longer, extending to the tip; the remainder of the vein extending to the apical margin below the tip. The upper disco-cellular vein arising from the postcostal at about two fifths of the length of the wing, extremely short and oblique. Middle disco-cellular twice its length, and transverse. Outer disco-cellular very long, strongly angulated in the middle; the anterior part continuing in the same line as the middle disco-cellular; the posterior part very oblique, uniting with the median vein at a distance from its base equal to half the distance between the bases of the first and second branches of the median vein, thus closing the discoidal cell in an acute point at nearly half the length of the wing; the third branch of the median vein beyond the junction much arched, or rather angulated, at about the same distance beyond the junction as exists between the first and second branches of the median vein.

Hind Wings subtriangular. Costal margin arched; outer angle rounded. Outer margin with wide but not deep scallops. Anal angle produced into a broad short tail extending between the extremity of the first branch of the median vein and that of the submedian vein. On the upper side near the anal margin, and parallel with the extremity of the abdomen, there exists in the male a small tuft of hairs set on obliquely; and between this tuft and the first branch of the median vein is an elongated folding of the wing, within which lie concealed a few elongated pale hairs. The precostal vein is curved at its tip towards the body. Costal vein curved, but extending only to two thirds of the length of the costa. Postcostal vein branching very near its base; its first branch extending to the outer angle of the hind wings. Discoidal cell very narrow, open. Median vein branching far from the base, with a considerable distance between its first and second branches; at about the same distance from the base of its third branch as exists between the first and second branches, is a thickening or swelling of the disc of the wing between this branch and the discoidal vein, forming, as it were, an incomplete termination of the discoidal cell.

Fore Legs of the male small, slender. Postcostal hairy, forming a slender brush of nearly equal thickness throughout. Tibia curved at the base. Tarsus about two thirds of the length of the tibia, simple. *Fore Legs* of the female considerably longer than those of the male, scaly. Femur much longer than the tibia, which, with the tarsus, is gradually but slenderly dilated to the tip of the limb, where it is obliquely truncate. Tarsus about two thirds of the length of the tibia; the basal joint about two thirds of the length of the whole tarsus; the remaining articulations being distinctly visible through the scales, which are set on so widely as almost to conceal the short spines with which the under sides of these joints (except the terminal one) are armed.

Four Hind Legs long, rather slender. Tibia armed beneath with a double row of spines. Tibial spurs strong. Tarsi armed beneath with four rows of fine spines; terminal joint of the tarsi wide. Ungues and their appendages short.

ABDOMEN moderately robust, that of the male having the terminal joints furnished on each side with four tufts of long curved hairs; terminal joint armed above with a long horny deflexed double acute hook, with several corresponding shorter horny pieces beneath.

LARVA long, hairy, especially about the head; head with two short broad dentated horns, with two dark transverse bars between the first and second, and second and third thoracic segments; extremity of the body forked.

CHRYSA LIS long, boat-shaped, entire, head acuminate and bifid.

The characters given by Fabricius of *Amathusia*, in his *Systema Glossatorum*, are, as usual, very vague and unsatisfactory; but, as he proposed the *P. Phidippus* of Linnæus as its only type, we can have no difficulty in applying the name to the present group, although it has been differently used by several Continental writers. From *Kallima* and *Zeuxidia* it is at once distinguished by the rounded extremity of the fore wings, and arrangement of the wing veins; from the former, also, by the slender palpi and very broad tails; and from the latter, by the want of the rounded dilatation of the hinder margin of the fore wings of the male, and the want of the spur arising from the third branch of the median vein of the same wings.

We are indebted to Dr. Horsfield for a knowledge of the transformations of the typical species, which he observed in Java, and which are represented in his *Descriptive Catalogue of the Lepidoptera contained in the Collection of the East India Company*. The Caterpillar is long, with a rounded head, armed on the sides above with a pair of short, broad, palmated horns; the body is covered with minute setæ, and also thickly clothed with hairs, especially about the head; the body is terminated with two long hirsute branches, pointed at the tip. The Larva is of a pinkish grey colour; the horns of the head edged with red, and two red bars across the thoracic portion of the body; the sides of the body above the legs are buff-coloured. The Chrysalis is long, destitute of conical protuberances, considerably boat-shaped, with the head-case long and acuminate, or rather terminated by two long slender points, thus very closely resembling the transformations of *Discophora*. The Caterpillar is not uncommon, and is found on the *Cocos nucifera* from December to April.

Our Pl. LIV.* f. 2. represents the male of the type, *Am. Phidippus*, from Java, the under side of which is of a rich fawn colour, with numerous narrow, straight, pale stripes running transversely across all the wings; and with two large ocelli, one near the outer angle of the hind wings, and the other near the anal angle of the same wings. The female has the brown colour of the upper surface of the wings richer, with an oblique, rather broad, fulvous buff patch, running from the costa of the fore wings beyond the middle; as well as with several indistinct buff longitudinal fasciæ, and a submarginal row of fulvous buff broad crescents. A specimen of the male in the British Museum, from India, has the fore wings with an indistinct, subapical, oblique, fulvous bar, as well as a submarginal fascia of the same colour; the fascicle of hairs opposite the extremity of the abdomen is longer and fulvous-coloured, and the outer ocellus is as large as the other.

A splendid species of the genus (*A. Amythaon*) has lately been received from Sylhet, having the wings on the upper side of a rich dark brown, with a purple tinge; the fore ones in the male with a very broad oblique fascia of beautiful lilac; the interior basal portion of the hind wings is clothed with long, jet black, velvety scales, and there is a tuft of elongated brown hairs opposite the middle of the abdomen. The female of this species has a broad, rich, golden yellow, oblique fascia across the fore wings, interrupted near the hinder angle with narrow brown arches. The under side of this species is buff, with rich brown slender striæ extending across all the wings. The tail in this species is much narrower than in *A. Phidippus*.

AMATHUSIA.

1. AM. PHIDIPPUS.

Papilio Phidippus Linnæus, *Syst. Nat.* ii. p. 752. n. 37.;
Fabricius, Ent. Syst. iii. pt. 1. p. 71. n. 220.; *Cramer, Pap.* t. 69. f. A.B.; *Fabricius, Syst. Glossatorum* (*Amathusia Phid.*); *Godart, Enc. M.* ix. p. 439. n. 2. (*Morpho Phid.*); *Horsfield, Cat. Lep. Ins. East Ind. Comp.* pl. 7. f. 10. (larva and details).
Mœra Phidippe Hübner, *Verz. bek. Schm.* n. 477.
Amathusia Phidippus Doubl. *Westw. & Hewits. Gen. Diurn. Lep.* pl. 54.* f. 2.
Thoressa Phidippus Boisduval Coll.

Var. *Amathusia Patalena* Westwood, *Cabinet of Orient. Entomology*, p. 40. pl. 19. f. 1.

Java.

B. M.

2. AM. AMYTHAON.

Amathusia Amythaon E. Doubleday in *Annals of Nat. Hist.* xix. 175., *List Lep. Brit. Mus.* App. p. 29.;
Westwood, Cab. of Orient. Entomol. p. 39. pl. 19. f. 1. 2, 3.

Thoressa Thessalus Boisduval Coll.

Silhet.

B. M.

Genus LXXXVII. ZEUXIDIA.

ZEUXIDIA Hübner, E. Doubleday.

AGLAURA Boisduval MS., Herrick Schäffer.

BODY very hairy; wings very large; fore wings acute at the tip, inner margin dilated in the males; hind wings tailed at the anal angle.

HEAD moderately large, hairy, with a strong conical frontal tuft.

Eyes large and prominent.

Labial Palpi elongated, compressed, obliquely elevated to the level of the top of the eyes, and porrected to about the length of the head, scaly in front, hirsute on the back of the middle and third joints; the third being slender, well-defined, and subacuminate at the tip.

January 1. 1851.

4 R

Antennæ about half the length of the fore wings, slender, slightly curved at the base, and with the tips deflexed; articulations elongate, distinct, the tips of each being rather thickened; the club is gradually formed, but slender, finely carinated beneath; the seven terminal articulations gradually acuminate, the extreme tip being very slender and acute.

THORAX oval, hirsute, rather small.

Fore Wings large, subtriangular, pointed at the tip. Fore margin very much arched; apical angle acute. Apical margin about three fourths of the length of the anterior; posterior angle rounded. Inner margin of the same length as the apical, very much dilated and rounded in the male, nearly straight in the female. Costal vein extending about five sixths of the length of the costa, being united with the costa before its extremity by two slender oblique veinlets. Postcostal vein throwing off its first branch at about one fourth of the length of the wing; this branch is united with the costal vein before the emission of the first veinlet connecting the costal vein with the costa (which veinlet must therefore be regarded as the normal extremity of the costal vein, the second oblique little veinlet connecting the costal vein with the costa being the termination of this first postcostal branch): second branch of the postcostal vein arising about half-way between the anterior extremity of the discoidal cell and the tip of the wing, very short and oblique; forming, in fact, a connecting veinlet between the postcostal and the costal veins, previous to the emission of the second little veinlet connecting the costal vein with the costa, which I have above considered as the representative of the termination of the first postcostal branch, and, consequently, the portion of the apparent costal vein beyond this second veinlet must be considered as the real termination of the second postcostal branch: third and fourth postcostal branches arising close together, at about the distance of five sixths of the length of the wing. Upper disco-cellular vein extremely short, scarcely distinct, arising at rather more than one third of the length of the wing; middle disco-cellular very short, transverse; outer disco-cellular very long, oblique, and curved, uniting with the third branch of the median vein at some distance beyond its origin, closing the discoidal cell in an acute point about the middle of the wing; this third branch of the median vein also throws off a short oblique branch at the like distance beyond the extremity of the outer disco-cellular vein, directed towards the tip of the wing, but not reaching the second discoidal vein; the wing exhibiting a fold between its tip and the apical margin, like a fourth branch of the median vein.

Hind Wings elongate-triangular. Costal margin rounded; outer angle rounded. Outer margin entire, rounded; anal angle produced into a tail, the sides of which are traversed by the first branch of the median and the submedian veins. Precostal vein curved towards the body at the tip. Costal vein scarcely extending more than half the length of the costa. Postcostal vein branching at a little distance from the base. The discoidal vein not angulated or curved at its base, forming a continuous line with the base of the postcostal vein. Median vein with its third branch arising at about half the length of the wing, angulated at the same distance from its base as exists between the first and second branches; emitting a transverse veinlet from the angle, which is terminated abruptly before it reaches the discoidal vein; thus nearly closing the discoidal cell, which is rather narrow, beyond the middle of the wing. On the upper side, the disc is marked with an oval patch of pale buff hairs, in the space between the base of the costal and postcostal veins; there is also an elongate-oval patch of brown hairs in the middle of the discoidal cell, lying longitudinally, and a row between this patch and the inner edge of the discoidal cell, lying obliquely towards the abdomen. Disc of the under side of the hind wings traversed by an oblique dark line, which extends to the middle of the costa of the fore wings, beyond which are two ocelli, wide apart; the sides of the tail are also marked with two pale longitudinal lines.

Fore Legs of the male small, pectoral, slender, thickly clothed with fine woolly hairs from the base to the tip, Tarsus about half the length of the tibia. *Fore Legs* of the female rather longer and more robust than those of the male. Tibia rather shorter than the femur. Tarsus two thirds of the length of, and rather thicker than, the tibia, spiny along the whole length beneath; basal joint occupying two thirds of the length of the tarsus; second, third, and fourth gradually shorter and transverse, each with long spines beneath; terminal joint simple.

Four Hind Legs long and scaly. Tibia longer than the femur, slightly spined beneath; tibial spurs strong. Tarsus as long as the tibia, with four rows of spines beneath; joints gradually becoming more slender to the tip. Claws rather small, acute, and curved. Paronychial small, bifid; upper division longer and slender. Pulvillus broad.

ABDOMEN rather small.

TRANSFORMATIONS unknown.

This genus is perhaps too nearly allied to *Amathusia*, from which, however, it is at once known by the acute fore wings, the hind wings terminating at the anal angle in a pointed tail, and especially the arrangement of the veins of the wings, which I have carefully described, as I find them incorrectly represented, in several respects, in Herrick Schäffer's sketch, published in the *Abhandlungen des Zoologisch-mineralogischen Vereines in Regensburg* (8vo, 1849, pl. 3. f. 23.), and which is the more to be regretted, as this is the wing which that writer has selected to illustrate the typical arrangement of the veins of the Diurnal Lepidoptera.

The general character of the markings of the wing in this genus closely resembles that of *Amathusia Amythaon*, the same beautiful lilac bar occurring in the males of both. The females are more varied in their markings than the males; but the colour of these marks does not exhibit so great a contrast as in *A. Amythaon*.

As in several of the adjacent genera, the male has the disc of the hind wings adorned with elongated tufts of hairs, which, I imagine, the insect has the power of raising and depressing at will.

A male specimen of the type of this genus, *Z. Luxerii*, in the British Museum, has supplied the chief of the generic characters given above. It has the fore wings marked with a very broad lilac bar, extending in a somewhat curved direction from the middle of the costa to the anal angle; the outer angle of the hind wings marked with a broad patch of lilac, and the middle of the discoidal cell with an elongate-oval patch of brown hairs; the tail of the hind wings is also considerably acuminate. The under surface is purplish brown, with dark clouds, and with the dark streak across all the wings beneath slightly bent towards the base of the fore wings, at its junction with the costa, and the ocellus on the disc of the hind wings next the costa is very much smaller than the one towards the anal angle; the extremity of the fore wings is also marked with a small pale oval patch. Dr. Boisduval possesses the female of this species, the wings of which on the upper side are brown, darker in the middle of the fore wings, beyond which is an oblique bluish white fascia, obliterated towards the anal angle, where are three obscure fulvous spots, the hind one occupying the anal angle; the hind wings are brown, with an internally subdentate dull fulvous margin. Beneath it agrees with the male, but is more uniform in its colours.

The British Museum also contains both sexes of an allied species from India, the male of which is distinguished by its more acuminate fore wings, destitute of the pale spot near the tip; the broad lilac bar of *Z. Luxerii* is replaced by a much narrower and more curved blue bar. The hind wings have the tails much less acuminate; the lilac patch of these wings is replaced by a very broad blue fascia, which extends to the anal angle; the middle of the discoidal cell has an elongate-ovate smooth spot destitute of hairs (which may, however, have been abraded); the dark brown streak across all the wings is curved towards the tip, at its junction with the costa, and the ocellus next the costa is very much larger and more distinct than that near the anal angle.

The female of this species (represented in our Pl. LII. fig. 1. as the female of *Z. Luxerii*) has the outer half of all the wings tinged with a blue gloss, with an oblique bluish white broad bar extending from the middle of the costa to the third branch of the median vein, where it is broken up into three rows of spots; the interior conical, the middle row nearly rounded, and the outer ones semicircular. There is a slight trace of these spots continued along the outer half of the hind wings.

Dr. Boisduval possesses another species from Java, which has the wings on the upper side brown, with the tips paler; the fore wings with a subapical indistinct row of fulvous dots. Beneath, the wings are brown, with a dark subapical streak across all the wings, reaching nearly to the anal angle, and with two ocelli beyond the middle of the hind wings; the anal angle of which is produced into an obtuse tail, with a dark spot near the tip beneath.

The beautiful butterfly figured by Cramer under the name of *P. Aurelius* appears to me to be a female of this genus, from the general resemblance of its markings to those of the female of *Z. Doubledayi*; it is of the greatest rarity, no specimen of it existing in any cabinet in England or France, so far as I can learn.

ZEUXIDIA.

1. *Z. LUXERII* *Hübner, Samml. exot. Schm. Band ii. pl. —. male; E. Doubleday, List Lep. Brit. Mus. p. 114.*
Java. B. M.
2. *Z. DOUBLEDAYI* *Westw. nov. sp.**
Zeuxidia Luxerii (fem.) Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 52. f. 1.
India. B. M.
3. *Z. BOISDUVALII* *Westw. nov. sp.†*
Aglaura Nephus Boisduval MS.
Java.

4. *Z. AURELIUS.*
Papilio Aurelius Fabricius, Spec. Ins. t. 2. p. 21., Ent. Syst. iii. pt. 1. p. 71. n. 222.; Cramer, Pap. pl. 168. f. A. B.; Godart, Enc. M. ix. p. 439. n. 1. (Morpho Aur.).
Mœra Agathina Hübner, Verz. bek. Schm. n. 462.
Sumatra.

Genus LXXXVIII. DISCOPHORA.

DISCOPHORA *Boisduval, E. Doubleday.*
MœRA and ZERYNTHIA *Hübner.*
MORPHO *Godt., Horsfield.*

BODY robust, very woolly; fore wings acute at the tip, with the apical margin truncated; males with a silky patch in the middle of the hind wings on the upper side.

HEAD rather small, woolly, with a small woolly frontal tuft.

Eyes large, prominent, broadly oval.

Labial Palpi slender, compressed, directed obliquely upwards, but not reaching so high as the level of the top of the eyes; the tips rather wide apart, porrected but little in front of the face; basal joint hairy beneath; middle joint scaly in front, but very hairy behind, the hairs resting on the sides of the frontal tuft; terminal joint very short.

* *Z. alis anticis maris magis acuminatis, puncto nullo apicali pallido, fascia obliqua media angustiori et magis curvata, cœrulea; alis posticis cauda magis acuminata, fascia latissima cœrulea ad angulum analem extensa; subtus striga communi obscura ad costam extus curvata, ocelloque posticarum subcostali multo distinctiori.* Femina alis extus cœruleo-subnitidis, anticis fascia media obliqua abbreviata cum triplici serie macularum ad marginem posticum extensis. (Pl. LII. f. 1.) Exp. alar. unc. $4\frac{1}{4}$ — $4\frac{3}{4}$.

† *Z. alis supra fuscis apice pallidioribus; anticis serie vix distincta subapicali macularum fulvarum; subtus fuscis, striga subapicali communi fere ad angulum analem extensa, ocellisque duobus pone medium alarum posticarum, angulo anali in caudam obtusam producto, subtus macula obscura notata.*

Antennæ not quite half the length of the fore wings, slender, terminated by a long and gradually formed, but slender club, finely carinated beneath; the seven terminal joints gradually acuminate.

THORAX very robust and woolly.

Fore Wings large, subtriangular. Fore margin very much arched; apical angle acute. Apical margin generally straight, rather more than two thirds of the length of the fore margin; hinder angle rounded. Inner margin straight, of the same length as the apical margin. Costal vein extending nearly to seven eighths of the length of the costa; a small oblique veinlet unites it with the costa, at about three fourths of the length of the wing, and another similar veinlet extends between it and the costa, close before the junction of its extremity with the costa. Postcostal vein with its first branch uniting with the costal vein near the middle of the latter; second branch of the postcostal forming a very slight oblique veinlet, between the postcostal and the costal, at about the length of three fourths of the wing; third and fourth postcostal branches arising close together at the length of seven eighths of the length of the wing, the third extending to the tip, and the fourth below the tip. Upper disco-cellular almost obliterated, as well as the middle one; lower disco-cellular much longer, curved, oblique, uniting with the third branch of the median at some distance from its origin, closing the discoidal cell in an angle before the middle of the wing; third branch of the median vein curved. Submedian vein straight, except at the base.

Hind Wings subtriangular; those of the females more evidently angulated in the middle of the hind margin, at the extremity of the third branch of the median vein. Precostal vein short, straight; tip curved suddenly towards the body. Costal vein reaching nearly to the outer angle. Postcostal arising from the costal considerably nearer to the body than the precostal, Discoidal cell open.

Fore Legs of the male small, very hairy, so as almost to conceal the articulation of the tarsus with the tibia.

Fore Legs of the female scarcely longer than those of the male, less hairy. The tarsus about two thirds of the length of the tibia, clothed with scaly hairs concealing the articulations, the first of which occurs somewhat beyond the middle of the tarsus; second, third, and fourth joints short, transverse; the fourth and fifth armed with very minute spines beneath, and several long setæ above.

Four Hind Legs moderately long and robust. Tibiæ and tarsi strongly spinose beneath.

ABDOMEN of moderate size.

LARVA long, cylindrical, with hairy tubercles; extremity of the body armed with two small conical spines.

CHRYsalis broadly boat-shaped, simple, widest across the wing-cases; head-piece acuminate into two long points; under a lens the whole surface is found to be delicately transversely wrinkled.

This genus is closely allied to *Amathusia* and *Zeuxidia*, not only in its transformations, as ascertained by Dr. Horsfield in Java, but also in the arrangement of the veins of the wings; in fact, the identity with *Zeuxidia* in the latter respect is carried so far, as to extend to the very delicate veinlets apparently connecting the costal vein with the costa, and the postcostal vein with the costal. Hence, I have not thought it necessary to mention again the real homologies of these veinlets. In like manner, the general style of colouring is very similar between the females of these genera. At the same time, it cannot be denied that the genus *Enispe*, illustrated in our 40th plate, is so closely related to *Discophora*, as perhaps more properly to constitute a section of the latter genus; from which it differs, however, not only in wanting the oval silky patch in the middle of the hind wings of the males, but also in the want of the second branch of the postcostal vein.*

This genus offers, in its transformations, another of those curious instances, which appear to me to indicate analogy, concealed under an apparent affinity. As in *Apatura*, the larva has the extremity of the body terminated by two small conical tails. This is also the structure of the larva of the typical *Satyridæ*. I cannot, however, in this single character, discover sufficient ground for uniting *Apatura* and *Discophora* in the same family as *Satyrus*, the general structure of which, both in the larva and imago states, indicates great weakness in their locomotive powers; whereas these genera evidently are as powerful in their flight as any of the most robust of the *Nymphalidæ*. I cannot but think, also, even in respect to the larva state, that the relationship of these genera with *Satyrus* is a forcing of nature, and that there is as great a difference between the soft villose caterpillars of the *Satyri*, with their rounded entire heads, and the caterpillars of *Apatura*, *Discophora*, *Amathusia*, and especially *Morpho*, as there is between those of the *Satyri* and the more typical *Nymphalidæ*.

The researches of modern anatomists have also completely overturned the distribution of the apterous insects of Linnaeus proposed by Mr. MacLeay, on the progression of which, and the analogies thereby afforded with the caterpillars of butterflies, Dr. Horsfield founded his arrangement of the Diurnal Lepidoptera; whilst we are now acquainted with many Thysanurous insects which are destitute of a forked anal appendage; so that, on these grounds, I feel the less regret in disturbing the arrangement proposed in the *Descriptive Catalogue of the Lepidopterous Insects in the Collection of the East India House*; the development of which has,

* In the description of the fore wings of *Enispe* (antè, p. 292.) it should have been stated, that the costal vein apparently extends to five sixths of the length of the costa, with which it is also united at about three fourths of the length of the wing by a very slender oblique veinlet. This veinlet, according to my view of the homology of these veins and their branches, is the real termination of the costal vein, the portion of the apparent costal vein which extends beyond it being the real termination of the first postcostal branch, which has, for a short distance, anastomosed with the costal vein.

I take this opportunity of describing a new and beautiful species of *Enispe* recently obtained by Mr. Hewitson from Silhet, which, although agreeing much more nearly in its colours with *Discophora*, has the peculiar arrangement of the wing veins of *Enispe* (wanting the second branch of the postcostal vein of the fore wings); the disc of the hind wings is, however, clothed with a wide and dense coating of long hairs, thus approximating to the silky oval patch of the *Discophora*.

ENISPE CYCNUS Westw. nov. sp. Alis supra fusco-nigris, anticis fascia abbreviata obliqua lilacino-alba e medio costæ extensa, postice in seriem lunularum latarum ejusdem coloris cum margine apicali parallelam terminata, serieque altera subapicali macularum angularum magis albarum; alis posticis ad angulum analem acutis, maculis rotundis subapicalibus lunulisque quinque marginalibus subpiceis; alis omnibus subtus obscure fulvis, fascia media subdentata, alteraque multo angustiori et magis irregulari inter basin et medium, liturisque variis fuscis; pone medium obscurius nebulosis, lunulis obscuris submarginalibus. Expans. alar. unc. 3½. Silhet.

nevertheless, in this country at least, been of the utmost service in extending our views of the natural relations of these beautiful tribes.

Dr. Horsfield found the Larva of *Discophora Celinde* on the *Cocos nucifera*, in the island of Java, from December to April. It feeds on the young leaves, and is of a brown colour, with two stripes along each side, and the belly of fleshy buff. The Chrysalis is pale brown.

DISCOPHORA.

1. DISC. TULLIA.

Papilio Tullia Cramer, *Pap.* t. 81. f. A.B. fem.; *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 98. n. 305.; *Godart*, *Enc. M.* ix. p. 446. n. 19. (Morpho T.); *Hübner*, *Verz. bek. Schm.* n. 479. (Mæra T.).

East India.

B. M.

2. DISC. CELINDE.

Papilio Celinde Stoll, *Suppl. Cram. Pap.* t. 37. f. 1. A.; *Godart*, *Enc. M.* ix. p. 446. n. 18.; *H. Schiffer*, *Samml. n. aus. Schm.* f. 5, 6. (male); *Horsfield*, *Cat. Lep. Coll. East Ind. Comp.* pl. 6. f. 6. (fem.), and pl. 7. f. 11. (larva, pupa, and details).

Papilio Menetho *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 83. n. 260.; *Jones*, *Icones*, v. t. 61.; *Donovan*, *Ins. of Ind.* pl. 30. f. 1. (fem.); *Godart*, *Enc. M.* ix. p. 446. n. 20. (Morpho M.).

Java, Serampore, Ashanti, Sylhet.

B. M.

Geographical variety ?? scarcely distinct from *Celinde* fem. figured by Horsfield.

Discophora Timora *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 54. f. 2.

From the island of Timor.

B. M.

3. DISC. SONDAICA.

Discophora Sondaica *Boisduval, Spec. Gen. Ins. Lep.* pl. 12. (8 B.) f. 3.

4. DISC. OGINA.

Morpho Ogina *Godart, Enc. M.* ix. p. 445. n. 17.; *Hübner, Samml. exot. Schm.* Band ii. pl. —. (*Zerynthia Ogina*).

Java.

5. DISC. ZAL *Westw. nov. sp.**

India.

Mus. Saunders.

* *Disc. alis anticis falcatis supra fuscis, basi fulvo fuscoque vario; fascia maculari obliqua media alba, cum duplici serie macularum fulvarum inter medium et marginem apicalem connexa; alis posticis in medio angulatis supra fulvis, basi margineque interno fusciscenti, cum seriebus quatuor lunularum fuscicarum margine postico parallelis: subtus albido-luteis obscurius parum variis, fascia communi fusca lituris punctisque nonnullis obscuris prope basin positae (fem.).* Expans. alar. unc. $3\frac{1}{2}$.

Family VIII. MORPHIDÆ.

BODY small and slender, or but moderately robust.

HEAD moderate-sized.

Eyes generally large and prominent.

Labial Palpi generally erect, small, wide apart, with the front edge not broad and dilated, but narrowed or sometimes sharp; generally scaly, or clothed with depressed scaly hairs, in front.

Antennæ slender, and terminated by a very slender club.

THORAX moderate.

Wings very large, more or less ocellated beneath.

Fore Wings with the discoidal cell very much elongated, and always closed.

Hind Wings of the males generally furnished with one or two tufts of hairs near the base. Discoidal cell open or closed. Anal margin forming a deep gutter for the reception of the abdomen.

Fore Legs imperfect. Those of the male very minute and brush-like, with the joints of the tarsi obsolete; those of the female generally somewhat larger than those of the male, with the joints of the tarsi distinct, but without any terminal claws.

ABDOMEN small.

CATERPILLAR long, pubescent or spiny, attenuated behind. Head armed with several obtuse horns.

Abdomen terminated by two long conical tails.

CHRYSA LIS short, suspended by the tail, thick, cylindrical, or slightly carinated down the back.

It is unfortunate that Mr. E. Doubleday did not develop his views relative to the distribution of the Diurnal Lepidoptera into primary groups; as the present is one which he appears to have regarded in a light different from that in which all previous writers had done, but as the plates of this work have been inscribed with distinct family headings, I have here endeavoured to carry out his views.

Dr. Boisduval, in the introduction to his *Species général des Lépidoptères*, divided the section containing the butterflies with simply suspended chrysalides into as many as eight tribes (or, as they are termed in the present work, families), including the Nymphalides, Brassolides, Morphides, Satyrides, Biblides, and Libythides; these correspond exactly with the families Nymphalidæ, Brassolidæ, Morphidæ, Satyridæ, Eurytelidæ, and Libytheidæ of Mr. E. Doubleday's *List of the Lepidopterous Insects in the Collection of the British Museum*. The Morphides, in Dr. Boisduval's arrangement (which corresponds very nearly with those of Latreille and Godart), are characterised by having the discoidal cell of the hind wings always open; whence we learn that he evidently intended to exclude from the group Morphides (as Mr. E. Doubleday subsequently did) those large South American butterflies allied to *P. Eurylochus*, *Idomenæus*, &c., all of which have the discoidal cell of the hind wings closed; in addition to which, they possess a character hitherto unnoticed (in common with *Brassolis*), namely, the existence of a cell near the base of the hind wings, formed, as it were, by a supplemental basal branch of the postcostal vein uniting with the costal vein at some little distance beyond the precostal (a character which is also present in the true *Papilionidæ*). In the plates of the present work, however, Mr. E. Doubleday restricted the *Brassolidæ* to the single genus *Brassolis*, and these giant South American butterflies (forming the genera *Pavonia*, *Opsiphanes*, &c.) are united with the other *Morphidæ*; so that the group nearly corresponds with the genus *Morpho* of the *Encyclopédie Méthodique*, the characters of which, as laid down in the introduction to that work, are extremely vague, being founded merely on the form of the wings and the slenderness of the antennæ, and the contents of which, as there indicated, do not, in fact, coincide with those in the body of the work, the second section being removed to the next genus, *Satyrus*. It is true, indeed, that, although the arrangement of the veins of the wings of *Brassolis* and *Pavonia*, *Opsiphanes*, &c., exactly agrees, yet the palpi of *Brassolis* are very peculiar, and the caterpillar of that genus, as figured both by Merian and Stoll, differs most materially from that of *Pavonia* (even from *Pavonia Berecynthus*) in wanting the cornuted head and bifid tail.

By Dr. Horsfield and Mr. Swainson, the *Morphidæ* were united with the *Satyridæ* into one family, or stirps, which, on account of the supposed resemblance of the caterpillars to the *Thysanura* (*Lepisma*, *Podura*, &c.), was termed by the former *Thysanuromorpha*, the genera *Apatura*, *Paphia*, *Amathusia*, *Morpho*, *Melanitis*, *Hipparchia*, and *Nemeobius* being given as the typical genera, and *Cethosia* and *Brassolis* as aberrant genera. Mr. Swainson, with more particular reference to our *Morphidæ*, observes, that, although he had previously arranged these insects with the *Nymphalidæ*, yet more matured reflection, and the analogies they bear to other groups of higher value, induced him to consider them as entitled to a distinct station. "They have many peculiarities in their habits, independent of all such as have been pointed out in their metamorphosis. Here we find the largest butterflies in existence; the whole group being analogous to that of the ruminating animals among quadrupeds. Nearly all the typical species are confined to Tropical America. Their colours are distributed, on the upper surface, in large masses of shining blue upon a brown or dark ground. The genus *Amathusia* represents these noble insects in India, but their size is smaller, and they are destitute of brilliant colours. The smaller groups of this family [here allusion is made to the *Satyridæ*] are those only which are distributed over Europe; we have many species in England, known by the familiar name of Meadow-browns (*Hipparchia F.*). The strong peculiarity which runs through all these groups is, that the under surface of the wings is invariably ornamented with beautiful ocellated spots: these spots, in the large American species, resemble in form, but not in brilliancy of colour, those on the tail of the peacock; but in the European examples they are smaller, more numerous, and often silvery. The general structure of all these insects, even that of the largest, is weak. The typical groups live only in the dark primeval forests, resting on the trunks of trees during the meridian heat, and show a decided partiality for shade; some, indeed, only flying towards the dusk of the evening. These habits, strikingly contrasting with those of the *Papilionidæ* and the *Nymphalidæ*, show that we have reached an aberrant group of these Diurnal Lepidoptera, and illustrates that

general habit and structure must have more weight than partial considerations, drawn either from the larva, the pupa, or the perfect insect. The Caterpillar may be described typically as much lengthened, narrow at the end, having two long setæ, or caudal appendages, resembling tails; the head being armed with spines, or greatly widened in its form, like a shield; in the less typical groups [Satyridæ], the end of the body terminates in two points, and the head is frequently divided in a similar manner. The Pupa is more or less smooth, and is suspended with the head downwards, similar to the Nymphalidæ; the anterior part is sometimes much pointed [Amathusia], but in the European examples it is generally obtuse. Green is the prevalent colour; but no instances are known of these pupæ being ornamented with metallic colours.*

From the more detailed account of the habits of these insects given by M. Lacordaire in his memoir on the butterflies of French Guiana, published in the *Annales de la Société Entomologique de France*, 1833, p. 396., it is evident that Mr. Swainson's remarks on their semicrepuscular habits apply only to the genera Pavonia, Opsiphanes, &c.; the most common species being *P. Idomenæus*, *Automedon*, *Berecynthus*, *Xanthus*, &c., which, when disturbed, fly only to a very short distance, and then settle again, with their wings lying flat on the trunks of the trees. The habits of the genuine species of *Morpho* are, on the contrary, quite different. There are a considerable number of species in Guiana, and even those supposed to be rarest in collections in Europe are common. They fly, however, majestically around the tops of trees, so that, during a residence of twenty months at Cayenne, he was unable to obtain a single specimen of *M. Metellus*, *Hecuba*, or *Andromachus*, which he believed he had distinguished. The only species he was able to procure were *M. Menelaus*, *Helenor*, and *Achilles*; these have a different mode of flight from the former, jerking, as it were, forward, to the distance of eight or ten steps at a bound, and thus progressing very rapidly through the forests, so as to be taken with great difficulty. *M. Rhetenor* flies in the same manner, but at a greater height from the ground. M. Lacordaire confirms the correctness of the descriptions given, as he states, by Stoll of the transformations of *M. Achilles*† and *Pavonia Berecynthus*.

Referring to the observations which I have already published on the relations of the genera *Apatura* (which Mr. Swainson, notwithstanding its larva seems to be *totally different*, considers as obviously belonging to the Nymphalidæ), *Nymphalis*, *Amathusia*, and *Discophora*, (all of which, in regard to their larvæ, enter into the *Thysanuromorpha* of Dr. Horsfield, or the *Satyridæ* of Swainson,) I must observe, that I do not think our knowledge of the transformations of exotic groups sufficiently extended to enable us to judge of the propriety of separating the great group with suspended chrysalides into minor families. In the analysis of the genera which I have investigated (commencing at p. 251. of the present work), I have found no character sufficiently constant to allow of a division between the typical Nymphalidæ, even regarding *Limenitis* as typical, and other genera with broad scaly palpi, down to the *Discophoræ*, which, with *Amathusia* and *Zeuxidia*, are so intimately allied to *Thaumantis* and *Morpho*, with narrow palpi. The result of these researches has more than ever convinced me that *Papilio*, *Nymphalis*, *Erycina*, *Lycæna*, and *Hesperia* (to which *Heliconia* may perhaps be added) are, as considered in my *Introduction to the modern Classification of Insects*, the primary types of the Diurnal Lepidoptera.

The genera which constitute the present family, as above defined, may be divided into two primary sections.

First, those which have the discoidal cell of the hind wings open, unaccompanied by a small prediscoidal cell; including the genera *Clerome*, *Drusilla*, *Thaumantis*, and *Morpho*.

Second, those which have the discoidal cell of the hind wings closed, and accompanied by a small prediscoidal cell; including the genera *Pavonia*, *Dynastor*, *Opsiphanes*, to which may be added the remarkable genus *Narope*.

Genus I. CLEROME.

CLEROME *Boisduval MS.*

FAUNIS p. *Hübner.*

SATYRUS p. *Godt.*

BODY moderately robust; wings large, plainly coloured, with a row of small spots between the middle and the outer margin on the under surface.

HEAD rather broad.

Antennæ long (two thirds the length of the fore wings), nearly straight, composed of rather long joints; terminated by a long, but very slender, scarcely distinct club formed of short joints.

Labial Palpi compressed, ascending obliquely to about the height of two thirds of the eye, porrected in front nearly to the length of the head, not convergent, scaly. Middle joint clothed behind with hairs applied to the face.

THORAX oval, very hairy.

Fore Wings large, oval-triangular. Fore margin very much arched; apical angle rounded. Apical margin about two thirds of the length of the fore margin, entire, slightly convex; inner angle rounded. Inner margin rather longer than the apical, slightly dilated at the base in the male. Costal vein extending to about two thirds of the length of the costa. Postcostal vein with its first branch arising at about two sevenths of the length of the wing; second branch arising at about three fifths of the length of the wing; third and fourth arising at short distances beyond the second; all these branches free, the fourth extending to the tip of the wing. Upper disco-cellular vein very short, arising nearly at one third of the length of the wing; middle

* Swainson, *Cab. Cyclop. Nat. Hist. of Insects*, p. 94, 95.

† Stoll has not figured the transformations of *M. Achilles*. They are described by Godart after Mad. Merian.

disco-cellular equally short, nearly transverse; outer disco-cellular very long and curved, somewhat like the letter ω , the extremity reaching nearly to the middle of the wing, where it joins the third branch of the median vein at a short distance beyond its base, terminating the closed discoidal cell nearly in a point.

Hind Wings broadly ovate. Fore margin scarcely curved. Outer margin rounded; anal angle rounded. The disc above, near the extremity of the thorax, is furnished with a tuft of fine hairs in the male. Precostal vein short, curved towards the body. Costal vein extending to about two thirds of the length of the costa. Postcostal vein with its branches arising quite close to the base of the wing, the outer branch extending to the outer angle. Discoidal cell very narrow and open. Median vein with its branches wide apart.

Fore Legs of the male very small and brush-like, very woolly. *Fore Legs* of the female longer than those of the male, slender, scaly. Tarsus not half the length of the tibia; articulations indistinct, except when denuded of scales; obliquely truncate at the tip; armed with very small spines.

Four Hind Legs long, strong, scarcely spined beneath. Tibial spurs minute.

ABDOMEN rather small and slender.

TRANSFORMATIONS unknown.

This is a genus of very plain-looking butterflies, which have been united by Hübner and Godart with the *Satyridae*, but which are certainly most nearly allied to *Thaumantis*, from which they are at once distinguished by the second, third, and fourth branches of the postcostal vein of the fore wings arising very close together, far beyond the extremity of the discoidal cell, and by the row of small spots on the under side between the middle and outer margin. In the typical species, *C. Eumeus* and *Arcesilaus*, are slight indications of several dusky strigæ running across all the wings, visible especially in the hind wings.

The very remarkable butterfly figured in our Plate LIV., under the name of *Thaumantis Faunula*, ought also to be referred to the present genus, agreeing therewith in the arrangement of the veins of the wings, and also in their fasciated under surface; since, being semi-transparent, the undulating fasciæ and spots seen in our figure are those of the under side, which is far more striking in its appearance than the upper, being white, with the markings quite black; there being also one near the apical margin of the fore wings corresponding with that of the hind wings, represented in our figure.

All these insects are natives of India and the Indian islands.

CLEROME.

1. CLER. ARCESILAUS.

Papilio Arcesilaus Fabricius, Ent. Syst. iii. pt. 1. p. 153.

n. 470.; *Donovan, Ins. of India*, pl. 30. f. 2.; *Godart, Enc. M. ix. p. 497. n. 71. (Satyrus Arc.)*.

Clerome Arcesilaus Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 54. f. 5.*

Faunis canens *Hübner, Samml. exot. Schm. Band ii. pl. —.*

Morpho Leonteus Zinken-Somm. in Nova Acta, xv. p. 170. pl. xvi. f. 14, 15.

Java, Singapore, Siam.

B. M.

Papilio Gripus Fabricius, Ent. Syst. iii. pt. 1. p. 149. n. 457.; Godart, Enc. M. ix. p. 497. n. 70. (Satyrus Gr.).

Faunis Eumea *Hübner, Verz. bek. Schm. n. 527.*

Northern India, China.

B. M.

3. CLER. FAUNULA *Westw. nov. sp.†*

Thaumantis Faunula Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 54. f. 1.

Singapore.

B. M.

2. CLER. EUMEUS.

Papilio Eumeus Drury, Ill. vi. t. 2. f. 3.; Cramer, Pap. t. 183. f. C. D.

Genus II. DRUSILLA.

DRUSILLA *Swainson.*

HYADES *Boisduval.*

MORPHO *Zinken-Sommer.*

TENARIS *Hübner, Verz.*

BODY moderately robust; fore wings elongate-oval; hind wings nearly circular, marked with two very large eyelike spots.

Labial Palpi compressed, not convergent, thickly clothed with short hairs in front; the tip higher than the top of the eyes, and not porrected more than half the length of the head.

Antennæ short, slender, not more than two fifths of the length of the fore wings. Club very long and slender.

THORAX small, robust, oval.

Fore Wings elongate-oval. Fore margin strongly arched; apical angle rounded. Apical margin two thirds the

† *Clerome alis pellucidis (strigis paginæ inferioris supra obscure visis); anticis supra pallide fuscis, posticis albidis margine interno late fulvescenti; alis infra albis, posticis similiter fulvescentibus; strigis quatuor undatis, macula ovali in medio, lunulaque ad apicem cellule discoidalis posticarum, nigris. Exp. alar. unc. 3 $\frac{3}{4}$.*

length of the anterior. Posterior margin as long as the apical; dilated at the base in the males, with an emargination in the middle; nearly straight in the females. Veins arranged as in Clerome. The second branch of the postcostal vein arising at about two thirds of the length of the wing; the third and fourth branches arising at a little distance beyond the second. Submedian vein very much curved in the male, being parallel with the inner margin of the wing.

Hind Wings nearly circular, the portion between the anal margin and the middle of the wing being so much widened that the veins and branches are here disproportionately wide apart. On the disc of these wings, near the base, but concealed by the dilated lobe of the fore wings, there exists, in the male, a tuft of hairs; there is also an elongated tuft near the inner margin, opposite to the extremity of the abdomen. Veins arranged as in Clerome.

Fore Legs of the male very minute, hairy, but not forming a brush. Tarsus extremely short, oval, exarticulate.

Fore Legs of the female more than twice as long as those of the male, thick, scaly. The tarsus two thirds of the length of the tibia, strong, well articulated, but the articulations not seen except by denuding the limb. The tips of the joints within armed with small spines, those of the third and fourth joints alone visible through the scales.

Four Hind Legs long and strong, scaly, very slightly spined on the under side of the tibia and tarsus.

Tibia as long as the femur. Tibial spurs very minute. Tarsus as long as the tibia.

ABDOMEN moderately robust.

TRANSFORMATIONS unknown.

The insects of this genus are closely allied to Clerome, agreeing therewith in the Oriental habitat, dull colouring, and the veins of the wings of the species; but differing especially in the elongated form of the fore wings, and the large and striking eyelike spots with which the hind wings are ornamented, one of which is alone visible on the upper side, as represented in our Plate LIV. f. 4.; but on the under side there is a second eye near the outer angle, and on this side the eyes are greatly enlarged in size. In two fine species from the islands of the Eastern Ocean, in the collection of M. Boisduval, the eyes are visible on both sides of the wings.

A specimen of *Drusilla Horsfieldii*, in the collection of W. W. Saunders, Esq., offers an instructive peculiarity in respect to the arrangement of the branches of the veins of the fore wings, showing, by the irregularity which exists in one of the wings, how branches may become coalesced: the right-hand fore wing has the second and third branches of the postcostal vein free; but in the left-hand wing there is no second branch, but near the middle of the third branch, on the side next the base of the wing, there is a little offset, or veinlet, running from this third branch to the costa, and which is unquestionably the relic of the real second branch, which may therefore be considered as having coalesced with the postcostal vein, and partially with the third branch. This malformation also teaches us, that where branches throw off branchlets we may expect some departure from the normal type to have taken place, and that two branches have coalesced to a greater or less extent.

DRUSILLA.

1. DRUS. HORSFELDII.

Drusilla Horsfieldii Swainson, *Zool. Illustr.* 1st series, t. 11.; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 54. f. 4.

Hyades Horsfieldii Boisduval, *Spec. Gen. Ins. Lep.* pl. 13. (9 B.) f. 1.

Morpho Urania Zinken-Sommer in *Nova Acta*, xv. p. 167.

Java.

B. M.

A. B., pl. 185. f. A. B. C.; *Godart, Enc. M.* ix. p. 445. (Morpho J.); *Boisduval, Voy. de l'Astrolabe, Entomol.* pt. 1. p. 157.; *Donovan, Ins. of China*, pl. 33. f. 1, 2.

Tenaris Nysa Hübner, Verz. bek. Schm. n. 493.

Papilio Cassia Clerck, Icones, t. 29. f. 3.

Amboyna, Rawak, New Guinea.

3. DRUS. CATOPS nov. sp.*

Hyades Catops Boisduval MS.
New Ireland.

Mus. Bdv.

2. DRUS. URANIA.

Papilio Urania Linnaeus, Mus. Lud. Utr. p. 225., *Syst. Nat.* ii. p. 756.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 166. n. 512.

Papilio Jaius Fabricius, Gen. Ins. Mant. p. 258., *Ent. Syst.* iii. pt. 1. p. 54. n. 168.; *Cramer, Pap.* pl. 6. f.

4. DRUS. SELENE nov. sp.†

Hyades Sylene Boisduval MS.
New Guinea.

Mus. Bdv.

Genus III. THAUMANTIS.

THAUMANTIS *Hübner, E. Doubleday, Boisduval.*

MORPHO p. *Godt. Horsfield, Zink. g. Sommer.*

BODY elongate, rather robust; wings large, rounded, generally glossed with rich blue or purple, marked beneath with large ocelli.

HEAD large, hairy, with a small frontal tuft.

* *Drusilla alis albis*, anticarum costa apiceque late fuscis; posticis albis, basi pallide fulvescenti, angulo externo fusco, ocellisque duobus supra distinctis.

† *Drusilla, D. Urania major et multo pallidior*; alis anticis fœminæ albo magis distincto, ocellisque posticarum maximis et supra distinctis.

January 1. 1851.

Eyes large, prominent.

Labial Palpi nearly erect, the tip raised above the level of the top of the eyes, compressed, not convergent, rather small, clothed in front with scaly hairs; the back of the middle joint clothed with longer hairs, set on transversely, and applied to the face; extending forward only to a short distance in front of the head.

Antennæ long, nearly straight, slender, composed of elongated joints, each slightly thickened at the tip; terminated by a long, gradually formed, but slender club, formed of shortened joints, the extremity being gradually attenuated.

THORAX robust, very woolly.

Fore Wings large, wide, elongate-triangular. Fore margin very much arched; apical angle more or less rounded. Apical margin more than two thirds of the length of the anterior; hinder angle rounded. Hinder margin nearly straight, more than one third longer than the apical margin, which causes the latter to appear truncate. Costal vein long, extending nearly to five sixths of the length of the wing, being connected with the costa by two little oblique veinlets near its extremity. Postcostal vein with its first branch arising about one third of the length of the wing, running into the costal vein at about one half of the length of the wing; second branch very minute, connecting the postcostal and costal veins at about two thirds of the length of the wing; third and fourth branches arising close together at about five sixths of the length of the wing. Upper disco-cellular obsolete, or very minute, arising from the postcostal at rather more than one third of the length of the wing; middle disco-cellular very short, oblique; lower disco-cellular much longer, oblique, slightly curved, uniting with the third branch of the median vein at a very short distance beyond its origin; closing the discoidal cell in a moderately acute point considerably before the middle of the wing; this third branch very much bent beyond the junction with the lower disco-cellular vein.

Hind Wings nearly rounded-oval. Costal margin not very much curved. Outer margin waved. Precostal vein short; its tip bent towards the body. Costal vein extending to about two thirds of the length of the costa. Postcostal vein branching very near the base of the wing. The discoidal vein straight at its base, both the upper and lower disco-cellular veins being obsolete, and the cell open. The third branch of the median vein is strongly angulated at a little distance from its base, almost approaching the discoidal vein. On the upper side, the disc is furnished near the base, but towards the costal margin (so as to be partially covered by the base of the inner margin of the fore wings), with a tuft of hairs in the male, and the under surface is marked with two or more ocelli.

Fore Legs of the male slender, and rather elongated, clothed with rather short hairs, and not very feathery.

Fore Legs of the female longer than in the males, slender. Tibia and tarsus clothed with scaly hairs, almost concealing the articulations of the latter; the terminal ones being armed with minute spines.

Four Hind Legs long and strong. The tibia longer than the femur, scaly, with a few very short spines beneath; tibial spurs short. Tarsus as long as the tibia, rather more slender, finely spined beneath. Claws slender, curved, acute. Paronychial small.

ABDOMEN rather narrow and elongated.

TRANSFORMATIONS unknown.

The large and very beautiful insects composing the present genus are natives of the East, and may be considered as the Old World representatives of the Morphidæ of South America. The characters given above are those of the species marked on the upper side with splendid patches of blue or lilac colours. These species, it will be seen from the description given above, agree in the arrangement of the veins of the fore wings with *Discophora* and *Zeuxidia* (except in wanting the short spurlike branch arising from the third branch of the median vein), especially as regards the coalesced condition of the first and second branches of the postcostal vein; and hence, although in the generic description given above I have described the costal vein as connected with the costa by two short branchlets, the normal structure of the veins and branches requires us to consider the first of these branchlets as the real termination of the costal vein, the second of these branchlets as the real extremity of the first postcostal branch, and the supposed extremity of the costal vein as the real extremity of the second postcostal branch. With such very different forms as *Zeuxidia*, *Discophora*, and *Thaumantis*, it is remarkable to find such perfect identity extending to these minute branchlets; proving the great value of the characters afforded by the veins of the wings, as well as the affinity of these genera. This, too, is the more remarkable, because the splendid insect figured in our Pl. LV. as an example of this genus, under the name of *Thaumantis Camadeva*, although agreeing very closely in form with some of the species with glossy blue patches (*Th. Diore*, for example), differs from them in having a different arrangement of the postcostal branches: the first branch being free through its whole length, and extending to the costa beyond the extremity of the costal vein; the second branch being entirely obsolete; and the third and fourth branches arising close together at about five sixths of the length of the wing. I have represented this arrangement in my figures of this species, published in the *Cabinet of Oriental Entomology*. This species also differs from the preceding species, in having a row of five beautiful ocelli on the under side, in each of the four wings, beyond the middle. This arrangement is also found in the beautiful new species from the collection of W. W. Saunders, Esq., described below under the name of *Th. Nourmahal*.

THAUMANTIS.

1. THAUM. ODANA.

Morpho Odana Godart, *Enc. M.* ix. p. 445. n. 16.;
Horsfield, Cat. Lep. Ins. Coll. East Ind. Comp. pl. 6.
f. 5. and 5 a.; *Boisduval, Spec. Gen. Lep.* i. pl. 12.
(8 B.) f. 1. (*Thaumantis Odana*).

Thaumantis Oda Hübner, *Samml. exot. Schmett.* Band ii.
pl. —.

Morpho Klugius Zinken-Sommer in *Nova Acta*, xv. p. 165.
pl. 15. f. 12, 13. (male, mistaken for fem. by Z. S.).

Java.

B. M.

- | | |
|--|--|
| <p>2. THAUM. DIORES.
Thaumantis Diores <i>E. Doubleday, Annals of Nat. Hist.</i>
xvi. p. 234. (1845).
Northern India, Sylhet. B. M.</p> <p>3. THAUM. KLUGIUS.
Morpho Klugius <i>Zinken-Sommer in Nova Acta</i>, xv. p. 165.
pl. 15. f. 11. (male only).
Java.</p> <p>4. THAUM. PHAON.
Drusilla Phaon <i>Erichson in Nova Acta</i>, xvi. Suppl. p.
401. t. L. f. 1, 2 a.
Manilla.</p> | <p>5. THAUM. LUCIPOR <i>Westw. nov. sp.*</i>
Borneo. B. M.</p> <p>6. THAUM. NOUREDDIN <i>Westw. nov. sp.†</i>
India. B. M.</p> <p>7. THAUM. CAMADEVA.
Morpho (Thaumantis) Camadeva <i>Westwood, Cabinet of</i>
<i>Orient. Entomol.</i> p. 9. pl. iv. f. 1, 2.; <i>Doubl. Westw. &</i>
<i>Hewitson, Diurn Lep.</i> pl. 55. f. 2.
Sylhet. B. M.</p> <p>8. THAUM. NOURMAHAL <i>Westw. nov. sp.‡</i>
India. Mus. Saunders.</p> |
|--|--|

Genus IV. MORPHO.

MORPHO *Fabricius, Syst. Gloss.*MORPHO p. *Godt.*MEGAMEDE and LEONTE *Hübner.*

BODY very small; wings very large, variable in form, marked beneath (especially the hinder pair) with ocellated spots.

HEAD rather broad, slightly hairy, with a small conical tuft in front.

Eyes large, prominent, naked.

Antennæ short, slender, formed of rather elongated joints; terminated by a very slender gradually formed club, with short joints, finely carinated beneath.

Labial Palpi small, obliquely porrected, not elevated to the level of the top of the eyes, compressed, finely hairy in front, not convergent; the back of the second joint clothed with longer hairs in the middle; terminal joint minute, conical.

THORAX small, oval; neck hairy, as well as the sides of the metathorax.

Fore Wings very large, variable in form. Apical margin generally more or less emarginate. Costal vein extending to about two thirds of the length of the costa. Postcostal vein with its first branch arising nearly at half the length of the wing; second branch arising close beyond it, and before the anterior extremity of the discoidal cell; the third branch arising at about three fourths, and the fourth at about five sixths, of the length of the wing; all these branches free, the fourth extending to the tip of the wing. Upper disco-cellular vein almost obliterated, arising at a little beyond the middle of the length of the wing; middle disco-cellular long, and curved obliquely; outer disco-cellular as long, or nearly as long, as the middle disco-cellular, less oblique, uniting with the third branch of the median vein at a considerable distance from its base, and closing the discoidal cell much beyond the middle of the wing; this third branch strongly angulated where it receives the lower disco-cellular vein. The median is furnished at its base with a short spur, thickened at its junction with the vein, but which does not appear to me to form a distinct connexion between the median and submedian veins; neither can I perceive any distinct interno-median nervule represented in Pl. A. of Details, f. 3. (fore wing of Morpho Perseus).

Hind Wings large, and elongate, ovate-triangular, generally more or less repanded, that is, furnished with a series of scallops between the veins; not provided with tufts of hairs in the males. Precostal vein simple, curved towards the body. Costal vein slightly curved, extending to the outer angle. Postcostal vein with its first branch arising at about one third of the length of the wing. Upper disco-cellular forming the curved base of

* Thaumantis alis rotundatis supra nigris, apice fusciscentibus, disco omnium nitidissime violascenti-cæruleo; alis infra fuscis purpureo parum tinctis: anticis striga obliqua recta e medio costæ fere ad angulum analem extensa, parum lilacina; limbo communi pallidiori et e disco striga obscuriori separato, puncto luteo versus apicem marginis costalis posticarum, ocelloque parvo pone medium versus angulum analem nigro, semicirculo albo circuloque tenui nigro: antennis ferrugineis. Expans. alar. unc. $3\frac{1}{8}$. (Mas.)

† Thaumantis alis anticis sub apicem parum angulatis, anguloque anali posticarum in caudam brevem latam subproductis; alis omnibus supra fuscis margine apicali paullo pallidiori, disco omnium purpureo vix tincto, singulo posticarum fasciculis duobus pilorum nigrorum instructo; infra castaneo-fuscis, fascia communi submarginali magis castanea, posticis ocellis duobus magnitudine fere æqualibus, semicirculo albo circuloque nigro circumcinctis. Expans. alar. unc. $3\frac{3}{4}$. (Mas.)

‡ Thaumantis alis supra castaneo-fuscis, anticis fascia latissima fulva obliqua pone medium ad marginem extensa, serie communi submarginali literarum v fuscæ, alteraque lunularum ejusdem coloris, puncto albo subapicali anticarum; alis infra badio-fulvis fasciis duabus angustis fere rectis virescenti-albis obliquis, 1ma per medium cellularum discoidalium extensa, 2nda fere e medio costæ ad angulum analem extensa, singula intus linea nigra marginata; margine externo lato pallidiori, in quo ocelli 2 in alis anticis, 3 in posticis, singulo puncto medio lunulari albo notato: lineis duabus valde flexuosis et dentatis nigris submarginalibus maculaque nigra lilacina parum irrorata in angulo anali. Expans. alar. unc. $4\frac{1}{4}$. (An fem. Th. Camadevæ?)

the discoidal vein, and arising at a very short distance from the base of the preceding branch; lower disco-cellular vein wanting, so that the discoidal cell is long and open. Median vein with its first branch arising opposite to the first branch of the postcostal; second branch arising at a considerable distance beyond; the third branch curved, and approaching to the middle of the discoidal vein (Pl. A. f. 4., hind wing of *Morpho Perseus*).

Fore Legs of the male very small and delicate, and thickly clothed with hairs forming a brush. *Fore Legs* of the female much longer and rather thicker, scaly. Tibia much shorter than the femur. Tarsus longer and thicker than the tibia, especially towards the tip, well articulated; the articulations indicated by different-coloured scales; third and fourth joint with minute spines at the sides beneath; fifth joint minute, destitute of claws.

Four Hind Legs long and strong. Femur curved. Tibia equal in length to the femur, armed above with numerous small spines placed irregularly, and with a row of larger spines on each side beneath; tibial spurs moderate-sized. Tarsus nearly equal in length to the tibia, thickly armed with fine spines, those on the under side arranged in several rows. Ungues strong, hooked, and acute. Paronychiae large, bifid; the outer division slightly curved, setose; inner division nearly straight, small. Pulvillus moderate. Terminal joint of the tarsus armed above with long setæ, extending beyond the claws.

ABDOMEN small, furnished with small tufts of hair at the extremity in the males.

CATERPILLAR long, cylindrical, spinose; fore segments furnished with tufts of hair; tail bifid.

CHRYSLIS short, very much swollen, not angulated; head-case bifid.

This is, perhaps, the most splendid group of insects in the entire series of the Diurnal Lepidoptera. It is impossible to conceive any thing more brilliant than the changeable tints of blue, purple, and violet, which adorn the upper surface of the wings of *M. Adonis*, *Rhetenor*, and, above all, the new species, *M. Cypris*. Under the rays of a tropical sun, the flight of these beautiful creatures must be an enchanting sight. The structure of the scales of the wings, by which these rich effects are produced, has been carefully studied by M. Bernard Deschamps (*Annales des Sciences Naturelles*, February, 1835). Those of *M. Telemachus* are of large size, each marked with as many as a hundred striæ, composed of exceedingly minute cylinders, giving the scale the appearance of the strings of a harp or piano. Those of *M. Menelaus* have long been a favourite test-object with our microscopists (see Mr. Bowerbank's memoir on this subject, *Entomological Magazine*, vol. v. p. 300.).

The insects of this genus are at once distinguished from those of the preceding genera of the present family by the different arrangement of the branches of the postcostal vein of the fore wings, and especially by the great length of the middle disco-cellular vein; the antennæ are also much shorter; whilst they are at once distinguished from *Pavonia*, and the remainder of the genera of the Morphidæ, by the open condition of the discoidal cell of the hind wings, and the slenderness of the body.

The arrangement of the veins of the wings described above appears to me to occur throughout the whole of the genus, notwithstanding the difference in the form of the wings of many species; the only variation which I have found being in a male specimen of *M. Telemachus* in my collection, in which the first branch of the postcostal vein of the fore wings is abbreviated, not extending beyond the anterior extremity of the discoidal cell; it does not, however, unite with the costal vein, but is gradually attenuated and lost.

The wings vary very considerably in form in the different species. In *M. Rhetenor* and its female (*M. Andromachus*), the fore ones are long and almost falcate; in others they are broader, with the apical margin more or less emarginate; whilst in *M. Helenor* and *Laertes* they are more regularly triangular. From the great rarity of many of the species, and the diversity of the sexes, much confusion has arisen respecting several of these insects. Thus, the insect which has been considered as the female of *M. Anaxibia* is in fact the male of *M. Hecuba*. In the following list, I have had the experienced assistance of Dr. Boisduval, in placing together several of the supposed species, which a careful examination of Cramer's figures, or better still, if possible, of the insects themselves, will, I think, be found to confirm. It is with the view of rendering the iconography of one of the most beautiful of the species, *M. Cytheris*, complete, that I have obtained the loan of the female (the only known specimen of that sex) from Dr. Boisduval's collection, the male being already figured in his *Species général des Lépidoptères*, and by Hübner. It was also the more interesting to figure this female, as it scarcely differs in form, colours, or markings from the male, which are of a slightly richer blue, with the ocelli of the under surface scarcely visible through the wings from above; whilst the allied new species, *M. Hebe*, has the sexes totally unlike each other, as is also the case with several other species.

Madame Merian has figured the transformations of four species of this genus. Those of *M. Achilles* and *Telemachus* are represented in her plates 7. and 68. They represent long cylindrical larvæ, with several erect spines on each segment, and with the fore segments furnished with small tufts of hair; the head is bifid on the crown in the latter species, but appears simple in the former; the tail is forked in both. The chrysalids are very short, thick, not angulated, and with the head bifid. M. Lacordaire has confirmed the correctness of Madame Merian's observations as regards the transformations of *M. Achilles*, except that the perfect insect appears in fourteen days (which is the ordinary period for pupation of the great majority of Lepidoptera in Guiana), instead of five weeks, as described by Madame Merian (namely, from April 20th to May 26th). This is the more important, because the figures given by Madame Merian of the larvæ and pupæ of *M. Menelaus* and *Nestor* are very different, not only from the preceding, but also from each other; although those two supposed species are but the sexes of one species. She represents the larva of *M. Menelaus* with the head armed with two short upright horns, each segment of the body with three long acute spines, and the tail simple; whilst the chrysalis is represented as angulated, furnished on the back with a long curved horn, not suspended, but girt round the body with a thread. The caterpillar of *M. Nestor* is represented as quite simple, as well as the pupa, which is also not suspended, but girt. Madame Merian has evidently, in both these cases, mistaken the caterpillars and chrysalids of some other large butterflies, probably belonging to the genus *Papilio*, for those of these species of *Morpho*.

MORPHO.

1. MOR. HECUBA.
♂ Papilio Telemachus Cramer†, *Pap.* pl. 373. f. A. B.; *Fabricius, Ent. Syst.* III. pt. 1. p. 86. n. 269.
♀ Papilio Hecuba Linn. *Mant. alt.* 534.; *Fabricius, Syst. Ent.* p. 459.; *Ent. Syst.* III. pt. 1. p. 87. n. 273.; *Cramer, Pap.* t. 217. f. A. B.; *Godart, Enc. M.* IX. p. 440. n. 5. (Morpho H.).
Guiana, Cayenne. B. M.
2. MOR. PERSEUS.
♂ Papilio Perseus Fabr. *Spec. Ins.* II. p. 24. n. 98.; *Ent. Syst.* III. pt. 1. p. 86. n. 267.; *Cramer, Pap.* t. 71. f. A. B.; *Godart, Enc. M.* IX. p. 441. n. 7.
♀ Papilio Metellus Fabricius, *Mant. Ins.* II. p. 13. n. 122.; *Ent. Syst.* III. pt. 1. p. 88. n. 274.; *Cramer, Pap.* pl. 218. f. A. B.; *Godart, Enc. M.* IX. p. 441. n. 6.
Brazil, Surinam, Cayenne. B. M.
3. MOR. LAERTES.
Papilio Laertes Drury, *Ill.* III. t. 15. f. 1.; *Fabricius, Ent. Syst.* III. pt. 1. p. 84. n. 262.; *Godart, Enc. M.* IX. p. 444. n. 14.; *Lucas, Hist. Nat. Pap. Exot.* pl. 77. (Morpho Laertes); *Hübner, Samml. exot. Schm.* Bd. I. pl. —. (Potamis superba La.).
Papilio Epistrophus Fabricius, *Ent. Syst. Ind. alph.* p. 122.; *Donovan, Nat. Repos.* v. p. 143.; *Hübner, exot. Schm.* Band II. pl. —. (Leonte Epist. female).
Brazil. B. M.
4. MOR. THALPIUS.
Potamis superba Thalpius Hübner, *Samml. exot. Schm.* Bd. I. pl. —.
Brazil? B. M.
5. MOR. EPISTROPHIS.
Leonte Epistrophis (male) Hübner, *Samml. exot. Schm.* Bd. II. pl. —.; *E. Doubl. List Lep. Brit. Mus.* p. 115.
Brazil and W. Coast of S. America. B. M.
6. MOR. POLYPHEMUS.
Morpho Polyphemus Boisduval MS.; *E. Doubleday, List Lep. Brit. Mus.* App. p. 29.; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 55. f. 1.
Mexico. B. M.
7. MOR. ADONIS.
Papilio Adonis Cramer, *Pap.* t. 61. f. A. B.; *Esper, Pap. Exot.* t. 55. f. 2.; *Godart, Enc. M.* IX. p. 439. n. 3.; *Hübner, Verz. bek. Schm.* n. 478. (Mœra Ad.).
Leonte Æga Hübner, *Samml. exot. Schm.* Band II. pl. —.
Brazil, Guiana. B. M.
8. MOR. CYTHERIS.
Morpho Cytheris Godart, *Enc. M.* IX. p. 446. n. 13.; *Boisduval, Sp. Gen. Lep.* t. 12. f. 3.
Leonte Portis Hübner, *Samml. exot. Schm.* Bd. II. pl. —.
Female, *Doubl. Westw. & Hewitson, Gen. Diurn. Lep.* pl. 54.* f. 3.
Brazil. B. M.
9. MOR. AURORA Westw. nov. sp.†
Bolivia. B. M.
10. MOR. GANYMEDE nov. sp.§
Morpho Ganymede Boisduval MS. in Coll.
Bogota. Mus. Bdv.
11. MOR. HEBE nov. sp.||
Morpho Hebe Boisduval MS. in Coll.
Interior of Brazil. Mus. Bdv.
12. MOR. CYPRIUS nov. sp.‡
Morpho Cypris Boisduval MS. in Coll.
Columbia. Mus. Saunders and Boisduval.
13. MOR. RHETENOR.
♂ Papilio Rhetenor Cramer, *Pap.* pl. 15. f. A. B.; *Sulzer, Ins.* t. 13. f. 1.; *Donovan, Ins. of China*, pl. 29.; *Godart, Enc. M.* IX. p. 444. n. 12.; *Hübner, Verz. bek. Schm.* n. 465. (Megamede Rhetenoris).
♀ Papilio Andromachus Cramer, *Pap.* t. 56. f. A. B.; *Herbst, Pap.* t. 34. f. 2, 3.; *Godart, Enc. M.* IX. p. 440. n. 4. (Morpho And.) (but not of Fabricius, which is an Acræa).
Megamede Chalciope Hübner, *Verz. bek. Schm.* n. 466.
Surinam, Cayenne.
14. MOR. HERCULES.
Papilio Hercules Dalman, *Anal. Ent.* p. 40. n. 6.
Brazil.
15. MOR. MENELAUS.
Papilio Menelaus Linnaeus, *Mus. Lud. Ulr.* p. 200., *Syst. Nat.* II. p. 748. n. 20.; *Clerck, Icon.* t. 21. f. 1, 2.; *Fabricius, Ent. Syst.* III. pt. 1. p. 86. n. 270.; *Cramer, Pap.* t. 21. f. A. B.; *Hübner, Samml. exot. Schm.* Bd. I. (Potamis conspicua Men.), *Verz. bek. Schm.* n. 488. (Leonte Menelae); *Godart, Enc. M.* IX. p. 441. n. 9. (Morpho M.); *Lucas, Hist. Nat. Lep. Exot.* t. 76.; *Merian, Surinam, Ins.* t. 53.
♀ Papilio Nestor Linnaeus, *Syst. Nat.* II. p. 752. n. 40.; *Fabricius, Ent. Syst.* III. pt. 1. p. 85. n. 266.; *Cramer, Pap.* pl. 19. f. A. B.; *Merian, Surin. Ins.* pl. 9.
Leonte Nestira? Hübner, *Samml. exot. Schm.* Band II. pl. —., *Verz. bek. Schm.* n. 486.
Demerara, Guiana, Brazil. B. M.
16. MOR. GODARTII.
Morpho Godartii Guérin-Ménéville, *Icon. R. An. texte*, p. 487.
Bolivia.
17. MOR. ANAXIBIA.
Papilio Anaxibia Esper, *Aust. Schm.* t. 55. f. 1.; *Godart, Enc. M.* IX. p. 441. n. 8.; *Hübner, Samml. exot. Schm.* Band II. pl. —. (Leonte An.).
♀ Papilio Telemachus Linnaeus, *Syst. Nat.* II. p. 752. n. 41. ?; *Merian, Ins. Surin.* ? pl. 68.
Brazil, Guiana. B. M.
18. MOR. ACHILLES.
Papilio Achilles Linn. *Mus. Lud. Ulr.* p. 211., *Syst. Nat.* II. p. 752. n. 42.; *Clerck, Icon.* t. 24. f. 3, 4.; *Fabricius, Ent. Syst.* III. pt. 1. p. 81. n. 253.; *Cramer, Pap.* pl. 27. f. A. B., pl. 28. f. A.; *Hübner, Samml. exot. Schm.* Bd. II. pl. —. (Potamis consp. Achill.) and Bd. II. pl. —. (Leonte Achillaena); *Merian, Ins. Surin.* pl. 7.
Leonte Deidamia Hübner, *Verz. bek. Schm.* n. 487.
Demerara, Surinam. B. M.

† Cramer's figure certainly represents a male insect, of which I possess a specimen. I should, therefore, have employed the specific name Telemachus for this species; but prefer retaining the name of the female, in order to avoid confusion with the Linnaean P. Telemachus, which is probably the female of M. Anaxibia.

‡ Morpho alis anticis margine apicali emarginato, posticis angulo anali subtruncato, argenteo-cærulescentibus nitidissimis, viridi et violascenti certo situ nitentibus subpellucidis, costa tenui nigricanti puncto albo pone medium costæ, margine externo omnium maculis nigris ad apicem venarum notatis; alis infra dimidio basali cervino striga pallida media transversa per cellulam discoidalem extensa, dimidio apicali griseo-cervino, striga subapicali (in alis posticis undulata) alteraque angustiori submarginali albis; anticis cum ocellis tribus pone medium, posticisque cum ocellis quatuor, duobus majoribus, singulo lunulam albam includente. Expans. alar. unc. 4½.

§ Morpho alis integris, posticarum angulo anali in caudam parvam producto; supra semipellucidis, albis cæruleo-violascenti splendidissime nitidis.

|| Morpho alis supra maris nitidissime cæruleis; posticis angulo anali subtruncato; fœminæ aurantio-fulvis dimidio apicali omnium fusco, maculis flavidis notato.

↓ Morpho alis anticis elongatis margine apicali subemarginato integro, posticis vix repandis; omnium disco splendidissime purpurascenti-cæruleo, fasciis duabus communibus e maculis flavido-albis formati, in alis posticis continuis; subtus griseo-umbrinis, basi magis umbrinis; albo fasciatis et maculatis; anticis ocellis tribus, posticis sex; palpis corporeque subtus rufo notatis. (Mas.) Expans. alar. unc. 5½. Obs. Omnium Papilionum nitidissimus!!

19. MOR. HELENOR.

Papilio Helenor Clerck, *Icon.* t. 24. f. 3, 4.; *Cramer*, *Pap.* pl. 86. f. A.B., pl. 373. f. C.; *Godart*, *Enc. M.* ix. p. 443. n. 13. (*Morpho H.*); *Boisduval* in *Cuvier*, *Règne Animal*, ed Crochard, *Ins.* pl. 140. f. 1, 2.
Leonte Achilleja Hübner, *Verz. bek. Schm.* n. 489.
Potamis consp. *Leonte* Hübner, *Samml. exot. Schm.* Band

i. pl. —. male, pl. —. fem.; *Lucas*, *Hist. Nat. Lep. Exot.* pl. 75. (*Morpho Leonte*).

Demerara, Brazil.

B. M.

20. MOR. REINWARDTIANUS.

Morpho Reinwardtianus *Drapiez*, *Ann. Gén. des Sc. Phys. de Brux.* t. vii. p. 278. pl. 109.

Brazil.

Genus V. CALIGO.

CALIGO Hübner, *Verz.*

MORPHO p. *Godt. Enc. M.*

PAVONIA p. *Godt. Enc. M. Suppl.*, *E. Doubl.*

BODY robust but small; wings very large, rounded, ocellated beneath; prediscoidal cell of hind wings small; hind wings of the male with a very slight canal, and a small tuft of hairs near the anal margin, opposite the middle of the abdomen.

HEAD moderately large, hairy, with a conical tuft in front.

Eyes large, naked.

Antennæ slender, scarcely more than one third of the length of the fore wings, terminated by a very slender and gradually formed club.

Labial Palpi rather large, porrected obliquely, moderately hairy; the tip rising above the level of the top of the eyes, and advanced in front nearly to the length of the head. Middle joint with a tuft of hairs on the back, resting on the sides of the conical tuft of the face.

THORAX robust, hairy.

Fore Wings very large. Costal margin much curved; apical angle strongly rounded. Apical margin straight or very slightly concave, and but slightly waved, not much more than two thirds of the length of the costal margin; posterior angle rounded. Inner margin somewhat dilated and convex, in the males. Costal vein extending nearly to two thirds of the length of the costa. Postcostal vein with its first and second branches arising about the middle of the length of the wing, before the anterior extremity of the discoidal cell; third branch arising at about three fourths of the length of the wing; fourth branch arising a little beyond, and extending to the tip of the wing. Anterior disco-cellular vein distinct, about as long as the posterior, very oblique, and slightly curved. Middle disco-cellular vein twice or three times the length of the anterior, very much curved, its outer half being nearly longitudinal, whilst the posterior disco-cellular is nearly transverse, closing the discoidal cell transversely, at about two thirds of the length of the wing, uniting with the third branch of the median vein at about the same length from its base as exists between the first and second branches, the third branch being acutely angulated, the apical portion beyond the angle being nearly straight. The submedian vein is curved in the male, following the outline of the inner margin of the wing.

Hind Wings large, elongate-ovate, more or less entire, or but slightly waved along the outer margin; anal angle rounded off. Precostal vein short and forked. Costal vein extending nearly to the outer angle. Postcostal vein forming a small prediscoidal cell between its base and that of the costal vein; its first branch arising at a considerable distance from the base. Anterior disco-cellular forming the curved base of the discoidal vein, its basal portion being very much curved. Outer disco-cellular vein not more than half the length of the anterior, transverse, closing the discoidal cell at about half the length of the wing. The anal margin furnished, in the males, with an elongated narrow channel, and a small tuft of hairs.

Fore Legs of the male of moderate length. Tibia and tarsus very thickly clothed on the outside with loose hairs. Tarsus three fourths of the length of the tibia, simple. *Fore Legs* of the female thicker, but not much longer, than those of the male, more thickly clothed on the outside with shorter hairs, especially at the tip of the tibia and the tarsus, the joints of which are distinct and spined at the tip within, the tip oblique.

Four Hind Legs long and strong. Tibia shorter than the femur, strongly spined in rows. Tibial spurs strong. Tarsus as long as the femur, with numerous rows of fine spines. Claws rather small, very much curved and acute. Pulvillus and its appendages small.

CATERPILLAR elongate, rather thickest in the middle; head shield-like, and armed with several horns; each of the middle segments of the body with an erect spine; body terminated by two elongated conical appendages.

CHRYSA LIS thick, with an obtusely conical point on the back of the thorax case.

This genus comprises some of the largest species of known Lepidopterous insects, all of which are peculiar to the hottest parts of the New World, and are distinguished by the general sombre style of the colouring of the upper surface of the wings, by the reticulated dark markings of their under surface varied by the possession of a small ocellus near the tip of the fore wings, and by the hind wings being adorned with two ocelli, one smaller and more lunate in form on the costal margin, and the other very large in size and round towards the middle of the hind wing, traversed by the first and second branches of the median vein. The predorsoidal cell of these wings is very small, and the small channel bearing a minute tuft is close to the anal margin, opposite the middle of the abdomen.

It is unfortunate that the generic nomenclature of so magnificent a group of insects as the present should be the subject of great confusion; and as justice and the rules of priority compel me to revert to the original authorities, some little historical detail will be necessary. In the *Systema Glossatorum* of Fabricius, of which an abstract only has appeared in the sixth volume of Illiger's *Magazin für Insektenkunde*, we find these and the immediately allied species, for the first time, generically distributed: *Papilio Achilles*, *Menelaus*, *Hecuba*, and sixteen other species, composing the genus *Morpho*, characterised by the formation of the palpi and the *filiform antennæ*; whilst another genus, *Brassolis*, was proposed, with *clavate antennæ*, for *Papilio Sophoræ*, *Cassia*, *Obrinus*, and twenty-seven other species. As regards these two generic names there can, therefore, be no doubt that the former has been properly applied as we have applied it in a preceding page; whilst *Brassolis* must be restricted to *P. Sophoræ*, and the species immediately agreeing therewith. So restricted, these genera were accepted by Latreille in his *Genera Crustaceorum et Insectorum*, but were there regarded simply as sections of his great genus *Nymphalis*, corresponding with the family *Nymphalidæ* of various recent authors; and here (in 1809) we first find *Papilio Teucer*, *Idomeneus*, &c., formed into a distinct group, but, being regarded in the same sectional light, Latreille did not propose a distinct name for it. In 1816, however, Hübner, in his *Verzeichniss*, proposed a group with the name of *Caligo*, composed of *P. Teucer*, *Idomeneus*, *Eurylochus*, and *Ilioneus*. For our genus *Morpho* he proposed the name of *Leonte*, applying, by some strange misconception, the generic name *Morpho* to our genus *Prepona*; whilst the genus *Brassolis* was swollen by the addition of *P. Anaxerete*, *Berecynthus*, *Xanthus*, *Cassia*, *Cassiope*, *Quiteria*, and *Inviræ*.

The generic name *Pavonia* was first proposed by Godart in the Supplement to the ninth volume of the *Encyclopédie Méthodique* (1819), for the second division of the genus *Morpho* of the body of the work: "lequel se distingue des *Morphos* proprement dites en ce qu'il a les palpes moins barbus, la nervure inférieure du dessus des premières ailes courbée en S à son origine, et la cellule discoïdale des secondes ailes fermée postérieurement. Les males de quelques espèces de ce nouveau genre ont, à la région du bord interne des ailes inférieures, une fente longitudinale couverte de poils." On referring to his sections, given at the head of the genus in the body of the volume (p. 435.), we find this second division, by some singular mistake, made to comprise the *Amathusiæ* of Fabricius, and the species *Hecuba*, *Menelaus*, *Achilles*, &c., which are above described under the generic name of *Morpho*, and which have the cell of the hind wings open; whereas the *Amathusiæ* had been referred by Latreille (*Genera Crustaceorum et Insectorum*, iv. 196., to which arrangement Godart evidently alludes in the note at the foot of the page above quoted) to the same division as *Pap. Teucer*, *Idomeneus*, &c., in which the cell of the hind wings is closed. In the table and description of the species Godart altered his classification, uniting the *Amathusiæ* and the genuine species of *Morpho*, *Hecuba*, *Achilles*, &c., into his first section, and characterising his second section thus: "Cellule discoïdale des secondes ailes fermée en arrière par un nervure en angle aigu, et d'où part un rameau longitudinal qui s'étend jusqu'au bord postérieur." This second division is divided into three subdivisions upon the shape of the wings, the first subdivision consisting solely of our *Bia Actorion*; the second subdivision, with the fore wings concave, and the hind ones more or less elongated, consisting of *Morpho Aorsa*, and *Automedon*; and the third subdivision, with the fore wings not at all, or scarcely, concave, and the hind ones elongated, consisting of *M. Eurylochus* with its allies and the remainder of the *Morphidæ* with a closed cell in the hind wings, which Hübner had added to his genus *Brassolis*. Mr. E. Doubleday, in his *Catalogue of the Lepidoptera of the British Museum*, improperly applied the name of *Pavonia* to *P. Teucer*, *Eurylochus*, &c. (the genuine species of *Caligo* of Hübner), restricting the name *Caligo* to some smaller species, *Syme*, *Rusina*, *Batea*, and *Creusa*, and giving the supplemental species improperly added to *Brassolis* by Hübner under the name of *Pavonia*, with a mark of doubt. In Plates LVI. and LVII. of the present work, however, Mr. E. Doubleday altered his views, rejecting the name *Caligo*, giving a species congeneric with *Eurylochus*, as well as the *Caligo Rusina*, under the generic name of *Pavonia*, whilst Hübner's supplemental species of *Brassolis* were, for the first time, in Plate LVII., published as a distinct genus, under the name of *Opsiphanes*, having, however, previously, by M. Boisduval in his *Collection*, been inserted with *Syme*, *Rusina*, *Batea*, and *Creusa*, into a single genus, to which Hübner's name *Caligo* was misapplied.

The following summary will show at a glance the position of these names:

- MORPHO** *Fabr. Syst. Gloss.* = *Nymphalis*, Sect. II. 1 A. a. *Latr. Gen. Crust.* = *Leonte* *Hüb. Verz.* Type, *Pap. Achilles*.
CALIGO *Hübner, Verz.* 1816. = *Nymphalis*, Sect. I. 2 E. *Latr. Gen. Crust.* = *Morpho*, Sect. II. C. pars *Godart*; *Pavonia* pars *Godart, Enc. M. Suppl.* = *Pavonia* proper *Boisduval Coll.*, and *E. Doubleday, List. Lep. Brit. Mus.* = *Pavonia* pars *E. Doubleday*, Pl. LVI. of this work. Types, *P. Teucer*, *Eurylochus*, &c.
OPSIPHANES *E. Doubleday*, Pl. LVII. of this work. = *Pavonia*, species dubiæ, *E. Doubl. List. Lep. Brit. Mus.* p. 118.; and *Caligo* *E. Doubleday, List. Lep. Brit. Mus.* p. 117. = *Caligo* pars *Boisduval, Coll.* = *Pavonia*, Sect. II. B. and Sect. II. C. pars, *Godart.* = *Brassolis* pars *Hübner, Verz.* Types, *P. Xanthus*, *Berecynthus*, &c.
BRASSOLIS *Fabricius, Syst. Gloss.* Type, *P. Sophoræ*.

The information which we possess concerning the habits of the species composing the second of these genera, *Caligo*, will be found detailed in pages 332. and 333., whilst the only acquaintance we have with their transformations is to be obtained from Madame Merian's great work on the *Insects of Surinam*; and it is evident that that lady has been misled, so far at least as one of the two species of which she has figured the transformations is concerned. The 23rd plate is devoted to *C. Teucer*; the caterpillar of which is elongated, sub-cylindrical, with the four middle segments swollen, each of them bearing a long, erect, pointed, and slightly curved spine; the head is shield-shaped, and armed with several obtuse horns on each side; and the body is terminated by two long conical tails. It feeds on a variety of the banana, called *Baccoves*, changing to a chrysalis on the 3rd of December, and the butterfly is produced on the 20th of the same month. The chrysalis is thick and without angulations, except a single rather obtuse point in the middle of the back of the thorax. From the general similarity of the form of this larva to that of *Opsiphanes Berecynthus*, observed by Stoll and Lacordaire, I have no doubt that Madame Merian has given us the true caterpillar of *C. Teucer*; her figure of the chrysalis is, however, in all probability incorrect, at least in respect to its being girt round the middle of the body with a thread. Her plate 60. is devoted to *C. Idomeneus*; the caterpillar of which is represented as long, cylindrical, and of a reddish colour; each segment of the body bearing three blue tubercles, each of which emits a long villous filament; the head is small, with the crown produced into two short conical horns; and the tail appears short, entire, and slightly pointed. It was found on the *Justicia*; and Mad. Merian states that it "s'enferma d'abord dans son cocon, et se transforma en une fève (chrysalis) tout à fait rare." The chrysalis is, however, represented as naked; the abdomen with several series of conical protuberances; the head produced into a thick and long turned up snout, obtuse at the tip; and with a strong

curved obtuse horn in the middle of the back of the thorax. It is contrary to all analogy, to believe that a chrysalis like this could have been enclosed in a cocoon; whilst there is equal reason for believing that neither it nor the caterpillar is that of any species of *Caligo*.

The splendid new species of *Caligo* represented in our Plate LVI. fig. 2., *C. Ajax*, has the under side of the wings of fulvous buff and whitish colours, the base of the fore wings varied with a great number of large black oblique markings, and the hind wings with an immense number of small black transverse strigæ and two large eyes; a pale buff-white bar replaces the pale bar of the upper surface, beyond which, in the fore wings, is a darker subdentate fascia with a subapical ocellus, three white crescents, and a submarginal black stria; the hind wings, also, have an indistinct dark submarginal stria and outer margin. The female has the fascia of the fore wings of a rich blue colour, and that of the hind wings of a dull yellowish white.

Another splendid new species has recently been received from Mexico, allied to *C. Ajax*, having the hind wings ornamented with a very broad margin of orange (*C. Uranus Dahne*).

I have added, at the end of the genus, *P. Automedon* and several other insects agreeing with the true species of *Caligo* in the large size and even still more elongated form of the hind wings, and the small size of the prediscoidal cell of the same wings; but which differ from them in their more brilliant colours, and in the very peculiar large elongate-oval patch of velvet-like plush near the extremity of the anal margin of the hind wings in the males. Mr. E. Doubleday has united them with *Opsiphanes*, from which they are distinguished by the small size of the prediscoidal cell, and the velvety patch above mentioned.

CALIGO.

Section I. *Hind Wings of the Males with a small tuft of hairs opposite the middle of the abdomen, and close to the anal margin.*

1. CAL. IDOMENEUS.

Papilio Idomeneus Linn. *Mus. Lud.* p. 213., *Syst. Nat.* ii. p. 753. n. 45.; *Clerck, Icones*, t. 20. f. 1.; *Merian, Surinam Ins.* t. 60.; *Fabricius, Syst. Ent.* p. 459.; *Ent. Syst.* iii. pt. 1. p. 88. n. 275.; *Cramer, Pap.* pl. 52. f. 2., pl. 390. f. A.B.; *Godart, Enc. M.* ix. p. 449. n. 27.

Papilio Surinamensis *Petiver, Gazoph.* t. 28. f. 1. Surinam, Demerara, Brazil. B.M.

2. CAL. MARTIA.

Morpho Martia *Godart, Enc. M.* ix. p. 450. n. 29. Brazil. B.M.

3. CAL. INACHIS.

Morpho Inachis *Godart, Enc. M.* ix. p. 449. n. 28. Brazil. B.M.

4. CAL. EURYLOCHUS.

Papilio Eurilochus *Cramer, Pap.* pl. 33. f. A., pl. 34. f. A.; *Godart, Enc. M.* ix. p. 448. n. 24. (*Morpho Eur.*). Guiana, Brazil. B.M.

5. CAL. ILIONEUS.

Papilio Ilioneus *Cramer, Pap.* pl. 52. A.; *Godart, Enc. M.* ix. p. 448. n. 25. (*Morpho Il.*). Guiana, Brazil. B.M.

6. CAL. TEUCER.

Papilio Teucer Linn. *Syst. Nat.* ii. p. 753. n. 44., *Mus. Lud. Ultr.* p. 212.; *Merian, Surin. Ins.* t. 23.; *Sloane, Jamaica*, ii. p. 219. n. 24.; *Fabricius, Syst. Ent.* p. 458.; *Ent. Syst.* iii. pt. 1. p. 87. n. 271.; *Cramer, pl. 51. f. A.B.*; *Godart, Enc. M.* ix. p. 448. n. 26.; *Hübner, Samml. exot. Schm.* Band i. pl. —. South America. B.M.

7. CAL. AJAX.

Pavonia Ajax *E. Doubleday MS.*; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 56. f. 2. Venezuela, Guayaquil. B.M.

8. CAL. URANUS.

Pavonia Uranus (*Dahne*) *H. Schüffer, Samml. neu. Auss. Eur. Schm.* pl. 1. and 2.

Pavonia Telemachus *Hewitson, Proc. Ent. Soc. Zoologist*, p. 2976. Dec. 1850. Mexico. B.M.

9. CAL. ARISBE.

Caligo Arisbe *Hübner, Samml. exot. Schm.* Band ii. pl. —.

10. CAL. DEMOSTHENES.

Papilio Demosthenes *Perry, Arcana, or Mus. of Nature*, n. 8., August, 1810, pl. 3. Brazil.

11. CAL. BELTRAO.

Caligo Beltrao *Hübner, Samml. exot. Schm.* Bd. iii. pl. —. Brazil and Peru.

12. CAL. TARAMELA.

Morpho Taramela *Godart, Enc. M.* ix. p. 450. n. 30. Brazil.

13. CAL. ALCIMEDON.

Papilio Alcimedon *Dalman, Anal. Ent.* p. 41. n. 7. Brazil.

Section II. *Hind Wings of the Males with a silky patch near the extremity of the anal margin.*

14. CAL. AUTOMEDON.

Papilio Automedon *Fabricius, Gen. Ins. Mant.* p. 253.; *Ent. Syst.* iii. pt. 1. p. 87. n. 272.; *Cramer, Pap.* pl. 41. f. A.B. (male), pl. 389. f. A.B. (female); *Godart, Enc. M.* ix. p. 447. n. 23. (*Morpho Aut.*). Surinam, Brazil. B.M.

15. CAL. REEVESII.

Opsiphanes Reevesii *E. Doubleday MS.*; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 57. t. 3. An var. geogr. *C. Automedon* fem.? Brazil.

16. CAL. ÆSACUS.

Pavonia Æsacus (*Kaden*) *H. Schüffer, Samml. neu. auss. Schm.* f. 3, 4. Mexico.

Genus VI. **DASYOPHTHALMA** *Westw.*MORPHO p. *Godt.*PAVONIA p. *Godt. (Enc. M. Suppl.), E. Doubleday.*CALIGO p. *Hübner, E. Doubleday.***BODY** robust; wings moderately large, with the apical margin rounded; eyes hairy.**HEAD** large, finely hairy, not tufted in front.*Eyes* large, prominent, densely clothed with short hairs in both sexes.*Antennæ* slender, not quite half the length of the fore wings, slightly curved at the base as well as at the tip; joints moderately distinct; terminated by a very slender and elongated club, finely carinated beneath.*Labial Palpi* much compressed, hairy, porrected obliquely; the tip being nearly as high as, or higher than, the top of the eyes, but not extending far beyond the front of the head; basal joint very hairy; back of the middle joint slightly hairy; terminal joint small and conical.**THORAX** robust, short, and hairy.*Fore Wings* moderately large, triangular-ovate. Costal margin moderately arched; apical angle rounded. Apical margin about two thirds of the length of the costal, convex, slightly scalloped; inner angle rounded. Inner margin about as long as the apical, more convex in the males than in the females. Costal vein extending about two thirds of the length of the costa. Postcostal with its four branches free; the first and second arising before the anterior extremity of the discoidal cell; the third at about two thirds, and the fourth at about five sixths, of the length of the wing. Outer disco-cellular vein arising at nearly half the length of the wing, about as long as the space between the second postcostal branch and its origin, very oblique; middle disco-cellular about three times as long, very slightly curved, oblique: outer disco-cellular nearly half as long as the middle one, arising in a rather obtuse angle, and closing the discoidal cell transversely nearly at two thirds of the length of the wing; uniting with the third branch of the median vein at a greater distance from its base than exists between the origin of the first and second branches; the third branch quite straight beyond the junction.*Hind Wings* subovate, rather dilated at the outer angle, which is rounded, as well as the anal angle. The outer margin scalloped. Precostal vein forked; the anterior branch short, and at right angles; the posterior branch forming a prediscoidal cell by its junction with the base of the costal vein (which looks more like an anterior branch of the postcostal vein), the ordinary first branch of which arises at about one fourth of the length of the wing. The outer disco-cellular vein arises at a very short distance beyond it; this outer disco-cellular is quite straight, forming the base of the discoidal vein. The discoidal cell is closed by a nearly transverse vein, uniting with the third branch of the median vein at nearly a right angle, at a rather shorter distance from the origin of the latter than exists between the origin of the first and second median branches; the third branch beyond the junction being straight. On the upper side, the hind wings in the males have an oval velvety patch, traversed by the postcostal vein and the base of its branch, generally covered by the inner margin of the fore wings; there is also a smaller oval space near the base of the discoidal cell, denuded of scales, but furnished with a tuft of black erect hairs.*Fore Legs* of the male very short, but rather robust, pectoral, thickly hairy, and brush-like. The tibia and tarsus united scarcely longer than the femur. The tarsus two thirds of the length of the tibia, and exarticulate.*Fore Legs* of the female two thirds longer than those of the male, thickly clothed with slender scales. Tibia nearly as long as the femur. Tarsus thick; the basal articulation half the length of the tarsus; second, third, and fourth joints transverse, each with a pair of spines on the inner edge; terminal joint minute, and without claws.*Four Hind Legs* long, thickly squamose. Tibia and tarsus strongly spined; the spines on the upper side dispersed, those beneath and on the side in rows. Tibial spurs moderately long. Tarsus as long as the tibia. Paronychia bifid; the outer lacinia acute, curved, and as long as the unguis. Pulvillus short.

The two insects for which I have ventured to propose the present genus differ from the typical species of *Caligo* in the form of the wings, the large size of the prediscoidal cell of the hind wings, the character of the markings of the under surface of the wings, the position of the plush-like patches and fascicles of hairs on the upper surface of the hind wings, and especially in the very hirsute condition of the eyes. Mr. E. Doubleday had, indeed, in his *List of the Lepidoptera of the British Museum Collection*, separated them (with *P. Syme* and *Batea*) from the types of *Caligo* (which he there named *Pavonia*); but in the subsequently published Plate LVI. of the present work he reunited *P. Rusina* with the genuine species of *Caligo* (*Pavonia E. D.*). This beautiful species, as well as *P. Creusa*, has the greater portion of the wings beneath, including the whole of the discoidal cell of the fore wings, marked with a vast number of very slender, dark brown, and pale buff, transverse, irregular streaks; the hind wings being marked with two or three beautiful ocelli, and the fore wings with one or two smaller ones: on the fore wings there is also an oblique pale fascia, as on the upper side. The two other species, *P. Syme* and *Batea*, appear to me to belong to the group which Mr. E. Doubleday termed *Opsiphanes*.

DASYOPHTHALMA.

1. DAS. RUSINA.

Morpho Rusina Godart, *Enc. M.* ix. p. 451. n. 93.; *E. Doubleday, List Lep. Brit. Mus.* p. 117. (Caligo Rus.); *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 56. f. 1. (Pavonia R.).
Pavonia Lycaon Lucas, *Lep. Exot.* t. 78. f. 1.
Brazil. B.M.

2. DAS. CREUSA.

Caligo Creusa Hübner, *Samml. exot. Schm.* Band ii. pl. —.

(male), pl. —. (female); *E. Doubleday, List Lep. Brit. Mus.* p. 117.

Morpho Anaxandra Godart, *Enc. M.* ix. p. 451. n. 34.; *Boisduval in Cuvier's Règne An.* ed. Crochard, *Ins.* pl. 141. f. 1. (Pavonia Anax.); *Blanchard, Hist. Nat. Ins.* iii. *Lepid.* pl. 17. f. 1.

Papilio Sphoreæ Donovan, *Nat. Repos.* t. 87, 88. (but not of Linnaeus).

Brazil.

Genus VII. OPSIPHANES *E. Doubleday MS.*

MORPHO p. Godt. *Enc. M.*

PAVONIA p. Godt. *Enc. M. Suppl.*

BRASSOLIS p. Hübner, *Verz.*

PAVONIA? *E. Doubleday, List Lep. Brit. Mus.*

BODY robust; wings moderately large; fore wings more or less concave in the apical margin; prediscoidal cell of hind wings large.

HEAD moderate-sized, hairy, slightly tufted in front.

Eyes large, naked.

Antennæ variable in length, but generally not half the length of the fore wings, slender, and terminated by a long and slender club (more robust and clavate in *P. Cassiæ* and its allies).

Labial Palpi compressed, more or less erect, and elevated to the level of the top of the eyes, densely clothed with thick hairs lying close together; the back of the middle joint without a decided tuft in the middle resting on the face; the terminal joint small and oval, and porrected only to a short distance in front of the face.

THORAX robust and hairy.

Fore Wings large, subtriangular. Fore margin well arched; apical angle generally rounded. Apical margin about two thirds of the length of the anterior; anal angle rounded. Inner margin about the length of the apical, generally straight, or but slightly convex in the males. Costal vein extending to two thirds of the length of the wings. Postcostal with the first and second branches arising close together, about half the length of the wings, a little before the anterior extremity of the discoidal cell; third branch arising at about two thirds of the length of the wing; fourth branch arising at about five sixths of the length. Upper disco-cellular arising at about half the length of the wing, short, oblique; middle disco-cellular considerably longer, less oblique, and sometimes a little curved, the concavity being towards the tip of the wing; lower disco-cellular less oblique, about equal in length to the middle one, uniting with the third branch of the median vein at almost a right angle, the space between the base of this third branch and the junction being generally greater than exists between the first and second branches, the terminal part of the third branch beyond the angle being nearly straight. The discoidal cell extending beyond the middle of the wing.

Hind Wings oval, or elongate-oval. The outer margin generally entire (but sometimes waved); and the anal angle generally rounded. Precostal vein forked, the anterior branch extending forward almost at a right angle, with the tip incurved. Costal vein extending to the extremity of the costal margin; its base angulated, and forming a prediscoidal cell of considerable size by its junction with the precostal vein. Upper disco-cellular vein forming the curved base of the discoidal; lower disco-cellular uniting in an acute angle with the third branch of the median vein at a short distance from its origin, closing the long narrow discoidal cell. On the upper side there is an elongated very narrow pouch, running longitudinally near the base of the first branch of the median vein, which receives a pencil-like brush of long hairs arising near the inner edge of the discoidal cell of these wings; there is also a tuft of long hairs nearer the abdominal margin, about opposite to the middle of the abdomen.

Fore Legs of the male slender, and but slightly brush-like. Those of the female scarcely longer than in the male, scaly, slender. The tarsus with minute spines on the inside.

Four Hind Legs long, robust, and but slightly spinose above, but armed with several rows of spines set very closely on the under side.

ABDOMEN robust.

CATERPILLAR long, cylindrical, thickest in the middle, gradually attenuated to the head and tail; head broader than the neck, with two erect, obtuse, setose horns on the crown, and with several small lateral ones, each of the four or five middle segments of the body, in some species, armed with a short acute point. **CHRYSLIS** robust; the head terminated by two short obtuse tubercles; thorax case sometimes swollen into a conical protuberance.

These insects may be considered as intermediate between the typical species of *Caligo* and the *Brassolidæ*: *P. Batea* being more closely allied to the former; whilst *P. Cassia* approaches very closely to the latter, not only in general appearance and colour, but in the much more strongly clavate antennæ; whilst *P. Aorsa*, and a new species to which I have applied the name of *P. Soranus*, are equally near, in their general form, to *Caligo Automedon*. From all these species they are at once distinguished by the large size of the prediscoidal cell of the hind wings, as well as by the proportions of the disco-cellular veins of the fore wings; whilst the very small size of the palpi, and the clavate antennæ of *Brassolis*, at once remove that genus from this group, independent of considerations derived from the preparatory states of these insects. The position of the pencil-like tufts of hairs on the upper side of the hind wings will also serve to separate these insects from *Dasyophthalma*, independent of their naked eyes, and the diversity of the markings of the under side of the wings.

All the species are natives of the hottest parts of the New World, and their general forms, and the robustness of the bodies of several of them, sufficiently indicate habits and powers of flight quite unlike those of the gigantic species of *Caligo*.

Stoll has given us very satisfactory figures of the transformations of *Ops. Berecynthus* and *Cassia*. The Caterpillar of the former, in its young state, is green above, and of a fleshy brown colour beneath; the head is furnished on each side with several obtuse horns, whilst the middle segment of the body is armed with a single erect dorsal spine, and the body is terminated by two long, gradually attenuated, setose filaments. When full grown it is entirely of a fleshy brown; the head similarly armed; the five middle segments of the body separately armed with a small erect spine, and the tails shorter.

The Chrysalis in this species has the upper side of the thoracic portion of the body produced into a triangular protuberance. Madame Merian represents it feeding on the *Cassia tricapularis*; and states that it changed to chrysalis on the 20th of May, and that the butterfly was produced on the 4th of June. The head of the chrysalis is produced into two short tubercles.

The Larva of *Ops. Cassia* is green, and delicately tubercled; the middle segments of the body are not armed with erect spines, but the head and tails resemble those of *Ops. Berecynthus*. The Chrysalis has the thorax of the ordinary convex form.

I have added to the present genus several species which it will probably be considered desirable, at some future period, to separate therefrom generically, namely, *Caligo Syme* *Hüb.*, which has the apical margin of the fore wings rounded; but this species has the prediscoidal cell of the hind wings of large size: the female of this species is remarkable for having a blue gloss on the upper surface of the hind wings, of which the males are destitute: also *Pavonia Aorsa* of Godart, remarkable for having the hind wings long and tailed, and furnished, moreover, on the upper side with an elongated patch of long hairs close to, and parallel with, the abdomen, as well as with a tuft resting in the elongated pouch in the position described in the generic character, on the sides of which it arises. This species has the prediscoidal cell of the hind wings of large size.

Another species from Para, in the Collection of W. W. Saunders, Esq., to which I have applied the name of *Opsiphanes Soranus*, has the general form of *Caligo Automedon*; but in addition to the pencil and tuft of hairs in the positions described above, there is a tuft of curved pale buff hairs on the upper side of the hind wings, below the base of the postcostal and costal veins; whilst the inner margin, beyond the extremity of the abdomen, is clothed, for the length of more than half an inch, with a thick coating of erect black hairs.

The majority of the species are ornamented beneath with two large eye-like spots on the hind wings, the one next the costa being occasionally more or less bean-shaped; the fore wings are also generally marked near the tips with a single ocellus of smaller size. *Ops. Berecynthus* is adorned with a row of six ocelli of different sizes in the hind wings; whilst in *O. Cassiope* the one towards the anal angle is nearly obliterated.

OPSIPHANES.

1. OPS. SYME.

Caligo Syme *Hübner, Samml. exot. Schm. Band ii. pl. —; E. Doubleday, List Lep. Brit. Mus. p. 117.; Boisduval, Spec. Gen. Lep. t. 12. f. 2. (Pavonia S.).*

Morpho Acadina *Godart, Enc. M. ix. p. 451. n. 32.; Guérin, Iconogr. Règne An. Ins. pl. 79. f. 1.*

Brazil.

B. M.

2. OPS. BATEA.

Caligo Batea *Hübner, Samml. exot. Schm. Band ii. pl. —; E. Doubleday, List Lep. Brit. Mus. p. 117.*

Morpho Saronia *Godart, Enc. M. ix. p. 451. n. 33.*

Brazil and West Coast of South America.

B. M.

3. OPS. BOISDUVALII.

Opsiph. Boisduvalii *E. Doubleday MS.; Doubl. Westw. & Hewits, Gen. Diurn Lep. pl. 57. f. 1.*

Caligo Meropis *Boisduval MS.*

Mexico.

4. OPS. AORSA.

Morpho Aorsa *Godart, Enc. M. ix. p. 447. n. 22.*

Pavonia Aorsa *Doubl. Westw. & Hewits, Gen. Diurn. Lep. pl. 54. f. 3.*

Brazil.

B. M.

5. OPS. SORANUS *Westw. nov. sp.**

Para.

Mus. Saunders.

6. OPS. CASSIOPE.

Papilio Cassiope *Cramer, Pap. pl. 57. f. A. B.*

Morpho Caryatis *Godart, Enc. M. ix. p. 454. n. 41.*

Surinam.

7. OPS. XANTHUS.

Papilio Xanthus *Linn. Syst. Nat. ii. p. 707. n. 122., Mus. Ludov. Ulr. p. 267.; Clerck, Icon. t. 34. f. 1, 2.;*

Fabricius, Syst. Ent. p. 483., Ent. Syst. iii. pt. 1. p. 150. n. 460.; Cramer, Pap. pl. 183. f. A. B.; Godart,

Enc. M. ix. p. 453. n. 40.

Brassolis Amphirhoe *Hübner, Samml. exot. Schm. Band ii. pl. —.*

Brazil, Surinam.

B. M.

* *Opsiphanes* alis anticis margine externo valde emarginato, posticis elongato-ovatis, vix repandis, supra fuscis; anticis fascia maculari in medio angulata, pone medium costæ ad angulum posticum currente, fulva punctisque tribus albis subapicalibus; alis posticis supra versus basin costæ penicillo curvato luteo, altero nigro discoidali, tertioque minori fusco ad marginem analem, fasciculoque erectorum pilorum nigrorum dimidium posticum marginis analis occupante instructis; alis infra luteo-fuscis, fusco albidoque pone medium anticarum, posticis fere undique piperatis, basi fusco tenue strigosis, anticis uni-posticis bi-oculatis. Expans. alar. ant. $4\frac{1}{2}$ unc.

8. OPS. BEREYCYNTHUS.
Papilio Berecynthus *Fabr. Spec. Ins.* ii. p. 59., *Ent. Syst.* iii. pt. 1. p. 151.; *Cramer, Pap.* pl. 184. f. B. C.; *Stoll, Suppl. Cr.* pl. 3. f. 4. A. B. C. (caterpillars and chrysalis); *Seba, Mus.* 4. t. 13. f. 2, 3.; *Godart, Enc. M.* ix. p. 453. n. 39.; *Hübner, Samml. exot. Schm.* Band i. pl. —.
 Surinam, Brazil. B. M.
9. OPS. SALLEI.
Opsiphanes Sallei *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 57. f. 2.
 Venezuela. B. M.
10. OPS. CASSIÆ.
Papilio Cassiæ *Linn. Syst. Nat.* ii. p. 767. n. 120., *Mus. Lud. Utr.* p. 265.; *Clerck, Icon.* t. 34. f. 3, 4.; *Mérian, Surin. Ins.* t. 32.; *Fabricius, Syst. Ent.* p. 483. n. 178., *Ent. Syst.* iii. p. 1. n. 150.; *Cramer, Pap.* pl. 105. f. A. B., 106. f. A.; *Stoll, Suppl. Cram.* pl. 3. f. 3. A. B. (caterpillar and chrysalis); *Godart, Enc. M.* ix. p. 454. n. 42. (Morpho C.); *Hübner, Samml. exot. Schm.* Band i. pl. —. ♂ pl. —. ♀.
Papilio Glycerie *Fabricius, Ent. Syst.* iii. pt. 1. p. 94. n. 291.
Papilio Quiteria *Cramer, pl.* 313. f. A. B. C. D.
 Surinam, Brazil, Colombia. B. M.
11. OPS. ÆTHON.
Papilio Æthon *Fabricius, Spec. Ins.* ii. p. 59.; *Ent. Syst.* iii. pt. 1. p. 152. n. 485., *Godart, Enc. M.* ix. p. 452. n. 38.
 Surinam.
12. OPS. INVIRÆ.
Potamis superba *Inviræ* *Hübner, Samml. exot. Schm.* Band i. pl. —. male.
Brassolis Inviræ *Hübner, op. cit.* Band ii. pl. —. fem.
 Brazil?

Genus VIII. DYNASTOR.

DYNASTOR *E. Doubleday MS.*
 MEGASTES *Boisduval MS.*
 MORPHO and PAVONIA *p. Godt.*

BODY very robust; labial palpi very closely applied to the face; hind wings of the males not tufted.
 HEAD moderately large, finely hairy, not tufted.

Eyes large, naked.

Antennæ short, slender, terminated by a slender gradually formed club, finely carinated beneath.

Labial Palpi small, erect, compressed, of nearly equal width throughout, applied quite close to the face, so as to be scarcely visible from above, hairy; the tip extending nearly to, or above, the level of the top of the eyes; terminal joint slender; basal joint very much curved.

THORAX very robust, hairy, especially on the metathorax.

Fore Wings large, elongate-triangular. Costal margin arched; apical angle rounded. Apical margin slightly convex, and scarcely scalloped. Inner margin somewhat longer than the apical, nearly straight. Costal and postcostal veins with the branches of the latter arranged as in *Opsiphanes*. Upper disco-cellular short, oblique, middle disco-cellular much longer, slightly curved at its base; outer disco-cellular shorter than the middle, transverse, uniting with the third branch of the median vein near the middle of the wing; the space between the first and second branches of the median vein being very much shorter than those between the origin of the third branch and its junction with the outer disco-cellular.

Hind Wings large, broadly ovate. Hinder margin rounded, entire, scarcely scalloped. Veins arranged as in *Opsiphanes*, except that the pre-discoidal cell is somewhat smaller; disc in the males destitute of fascicles of hairs.

Fore Legs of the male small, slender, and but slightly brush-like. The tarsus about two thirds of the length of the tibia, slender, cylindrical, and simple. *Fore Legs* of the female one third longer, and much more robust than those of the male; clothed with closely adpressed scaly hairs. The tarsus as thick as the tibia, articulated; the three middle articulations shortly spined beneath; the terminal joint small and unarmed.

Four Hind Legs moderately long. Femur longer than the tibia, curved. Tibia thickest before the middle, hairy, scarcely spined. Tibial spurs minute. Tarsi slender, shortly hairy, and with rows of spines beneath. Claws and paronychialia small.

The two insects of which this genus is composed might almost, from the robustness of the body and wings, and the peculiar style of their colouring, be mistaken for great moths. Notwithstanding their very powerfully built bodies, they seem scarcely fitted, however, for rapid flight. They are distinguished from the preceding genera of the present family by the palpi being applied quite close to the face, the moderate size of the pre-discoidal cell of the hind wings, the shorter extent of the discoidal cell of the fore wings, and the approximation of the first and second branches of the median vein of the fore wings. The want of tufts of hairs on the under wings of the males is also a characteristic distinction.

The type of the genus represented in our Pl. LVIII. has appropriately (so far, at least, as such a compliment to so remarkable a man can be deemed appropriate,) been named in honour of the great Emperor of the French. It is certainly one of the most striking of the Diurnal Lepidoptera, and its appearance is quite unusual. Its under side is fulvous, with a vast number of ill-defined darker

freckles, the inner half of the fore wings dark brown slightly irrorated with luteous scales, the pale fascia of the fore wings obsolete towards the costa, the apical portion of the costal margin slightly irrorated with white, and the hind wings marked with three blind ocelli.

The second species, *D. Darius*, is very sombre in its colouring, being of a blackish brown, with whitish spots in the fore wings, arranged nearly as in *D. Napoleo*; the hind wings in females have several more indistinct spots beyond the middle; the under side is very much freckled, the hinder half of the disc of the fore wings being uniform dark brown, in which the white spots reappear; there is a small elongate ocellus beyond the middle of the fore wings, and a larger one between the middle and anal angle of the hind wings, with a large elongate-oval fulvous spot near the costa, and another resting on the extremity of the discoidal cell, both with a double row of white scales.

These insects are natives of South America.

DYNASTOR.

1. DYN. NAPOLEO.

Dynastor Napoleon Doubleday, Westw. & Hewits. Gen.

Diurn. Lep. pl. 58. f. 2.

Megastes Napoleo Boisduval MS.

Brazil.

B. M.

iii. pt. 1. p. 52. n. 161.; *Godart, Enc. M.* ix. p. 452. n. 37. (Morpho Dar.).

Papilio Anaxarete Cramer, pl. 95. f. A. B. (male), pl. 374.

f. A. B. (female); *Godart, Enc. M.* ix. p. 452. n. 35.

Potamis superbus Anaxarete Hübner, Samml. exot. Schm. Band i. pl. —.

Surinam, Brazil.

B. M.

2. DYN. DARIUS.

Papilio Darius Fabricius, Syst. Ent. p. 482., *Ent. Syst.*

Genus IX. PENETES *Boisduval MS.*

BODY elongate, hairy; fore wings elongate, very concave, under side not ocellated.

HEAD of moderate size, not tufted in front.

Eyes large, lateral, naked.

Antennæ as long as the abdomen, or two fifths of the length of the fore wings, gradually thickening from the base; the joints distinct, and slightly dilated at the tip; the last twelve joints gradually shortened and thickened, forming a slender elongated club; under side finely carinated.

Labial Palpi nearly erect, compressed, very hairy in front, and on the inner surface; the tip considerably elevated above the level of the top of the eyes, and porrected but slightly in front of the head; terminal joint slender, elongate-conic, quite distinct.

THORAX robust, hairy.

Fore Wings considerably elongated. Fore margin arched; apical angle quite rounded off. Apical margin very deeply concave, more than two thirds of the length of the costa; anal angle rounded. Inner margin about as long as the apical, nearly straight. Costal vein extending to two thirds of the length of the fore margin. Postcostal vein with its first and second branches arising near together, at about one third of the length of the wing, before the anterior extremity of the discoidal cell; third branch arising at about three fourths, and fourth branch arising at about five sixths, of the length of the wing: all the branches free, and extending to the costa, the fourth extending to its extremity. The upper disco-cellular vein arises at a little distance beyond the second branch of the postcostal vein, it is rather short and oblique: the middle disco-cellular vein is rather longer, and continued in the same direction: and the outer disco-cellular vein is still rather longer, and slightly less oblique, closing the discoidal cell obliquely at the middle of the wing; being united to the third branch of the median vein at about the same distance from the base of the latter, as exists between the origin of its first and second branches, the point of junction forming an obtuse angle, beyond which the branch follows the slight curve of the adjacent branches.

Hind Wings oval. Hinder margin rounded, and but very slightly scalloped. Precostal vein forked; the anterior branch curved, the tip being turned towards the body. Costal vein with its base forming a pre-discoidal cell of moderate size; the tip extending to the extremity of the costa. Postcostal vein with its branches at a considerable distance apart. The outer disco-cellular vein closing the discoidal cell at a little distance beyond the middle of the wing, in an acute angle with the base of the third branch of the median vein.

Fore Legs of the male very slender, short, and pectoral, hairy, but slightly brush-like. Tibia as long as the femur. Tarsus about three fourths its length, hairy, gradually attenuated to the tip, armed on the upper side with several very slender and short bristles, distinctly three-jointed. The first joint two thirds of the whole length; the second joint rather longer than wide; and the third joint acuminate, and as long as the preceding, destitute of terminal unguis.

Four Hind Legs long, robust, scaly. Tibia rather slender, armed beneath and at the sides with several rows of

long spines. Tibial spurs strong. Tarsus slender, with rows of spines at the sides beneath. Claws and their appendages small.

ABDOMEN elongated, and rather slender.

The only known species referable to the present genus is a native of Minas Geraes, whence several individuals have recently been brought by M. De Gand. This is mentioned because the only previously known specimen, in the Collection of M. Boisduval (who kindly forwarded it to England for illustration in this work), was supposed to be a native of the Philippine Islands, a locality at variance with that of all the nearly allied genera, which are natives of the New World.

The genus is well distinguished by the form of the fore wings, the nearly continuous direction of the disco-cellular veins, the hairy palpi, the triarticulate anterior tarsi of the males, and especially by the peculiar colouring of the species (see Pl. LVIII. fig. 1.); the under surface being, moreover, similar to the upper, and consequently destitute of the beautiful ocelli which are so conspicuous a character of most of the preceding species of Morphidæ. The dark brown ground colour of the wings is, however, somewhat paler, with the veins dark brown. The upper surface of the hind wings in the males is destitute of any distinct tuft of hairs, but is furnished with long hairs all down the side of the abdominal fold, the fold itself being marked with a clear shining place.

PENETES.

1. PEN. PAMPHANIS.

Penetes Pamphanis Boisduval MS. ; Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 58. f. 1.
Minas Geraes.

Genus X. NAROE *Boisduval MS.*

BODY very robust and hairy; wings obscurely coloured, destitute of ocelli on the under side.

HEAD small, hairy, with a small erect tuft of hairs in front.

Eyes small, but very prominent, naked.

Labial Palpi rather large, nearly erect; the tip elevated very considerably above the level of the top of the eyes, and porrected but little in front of the head; compressed rather obliquely, so that the middle of the second joint approaches that of the opposite palpus, in front of the base of the spiral tongue; the back of this joint has a very minute triangular patch of scales in the middle; the entire palpus clothed with adpressed scaly hairs; terminal joint distinct, slender, elongate-conic, directed slightly inwards.

Antennæ short, consisting of but comparatively few articulations, gradually thickening from the base; the last fourteen joints forming a slender elongate club.

THORAX robust, and very hirsute.

Fore Wings of moderate size, more or less triangular; the apex acute. Fore margin well arched. Apical margin slightly concave, straight, or slightly convex. Inner margin straight, rather longer than the apical. Costal vein extending to about two thirds of the length of the costa. Postcostal vein with its first and second branches arising before the anterior extremity of the discoidal cell; the first running into the costal vein at about the middle of the length of the costa; the second extending to the costa beyond the extremity of the costal vein; the third arising at about two thirds, and the fourth at about three fourths, of the length of the wing; the third extending to, and the fourth below, the tip. Upper disco-cellular vein very short, oblique, arising at some distance before the middle of the wing: middle disco-cellular about twice its length, continued in the same direction: outer disco-cellular about half as long again as the middle one, rather less oblique; closing the discoidal cell near the middle of the wing; the third branch of the median vein being strongly angulated at the place of junction, which is about as far from the origin of this third branch as exists between the base of the first and second branches. Submedian curved in the middle in the males, in order to allow space for a patch of elongate orange hairs on the under side, which arises between the median and submedian veins.

Hind Wings more or less triangular, with the outer margin produced into an angle at the extremity of the second or third branch of the median vein in some of the species. Veins arranged as in *Penetes*, except that the prediscoidal cell is rather larger, and the costal vein does not quite extend to the extremity of the costal margin. Under surface of the wings obscurely freckled, and marked beyond the middle, in some species, with a row of very minute dots.

Fore Legs of the male minute, brush-like, densely hairy. Tarsus exarticulate, slender, and cylindrical.

Four Hind Legs moderately long and strong. Femur curved at the base, and longer than the tibia, which is strongly spinose; tibial spurs strong. Tarsi less strongly, but more closely, spined at the sides beneath.

Claws strong and curved. Paronychial small and slender.

ABDOMEN small, robust.

This is a very curious genus, regarded by M. Boisduval as more nearly allied to some of the Satyridæ, probably on account of the dull colours of the wings and the indistinct character of their markings; whilst Mr. Edward Doubleday deemed it nearer in affinity to the genus *Paphia* (see Pl. L.), to some of the species of which it indeed bears a resemblance in general size, acutely tipped fore wings, and occasionally angulated hind wings. It appears to me, however, to belong rather to the present family, and especially to approximate to *Penetes*, from which it scarcely differs in the arrangement of the veins of its wings, if we except the junction of the first branch of the postcostal with the costal vein of the fore wings, a peculiarity of considerable interest, which we have also observed in the *Paphiæ* and some other allied groups; in most of which, however, we have found the costal vein united with the costa by a slender veinlet before its termination, which veinlet must be considered as the real termination of the costal vein. In *Narope*, however, no such veinlet exists, and the costal vein does not extend farther than in *Penetes*; so that the first branch of the postcostal vein is, in fact, completely ankylosed with the costal vein, after its junction therewith. We also here find the prediscoidal cell of the hind wings of considerable size, thus agreeing with the typical *Morphidæ*; whilst the possession of a tuft of hairs on the under side of the fore wings, near the inner margin, accompanied by a corresponding polished space on the upper side of the hind wings, seems to indicate a further proof of this affinity.

The species are natives of Brazil and other parts of South America.

NAROPE.

1. NAR. CYLLASTROS.

Narope Cyllastros Boisduval MS.; Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 50. f. 4.
Para, Brazil. B. M.

2. NAR. CYLLABARUS *Westw. nov. sp.**

Bolivia.

B. M.

3. NAR. CYLLARUS *Westw. nov. sp.†*

River Rio, South America.

Mus. Hewits.

* *Narope* alis anticis margine apicali recto, posticis subtriangularibus haud angulatis, omnibus supra ferrugineo-fuscis margine apicali paullo obscuriori, anticis puncto parvo nigro subapicali (inter venas duas discoidales) fasciculo pilorum fulvorum in medio marginis postici; alis subtus fulvidis, fusco ferrugineoque subnebulosis nigroque piperatis, anticis puncto parvo nigro versus apicem cellulae discoidalis, alteraque submarginali; posticis ocello minimo nigro albo pupillato versus medium marginis costalis. Expans. alar. antic. unc. 3. (mas).

† *Narope* alis anticis apice acuto margine apicali convexo, posticis in medio (ad apicem rami tertii venae medianae) angulatis; supra obscure rufo-fulvis, costa margineque apicali lutescenti macula obcuneata castanea ad apicem cellulae discoidalis, striga dentata subapicali nigra; subtus lutescentibus, albido vix nebulosis nigroque piperatis, puncto parvo nigro versus apicem anticarum; posticis immaculatis et exocellatis, anticis etiam infra haud fasciculatis. Expans. alar. unc. $2\frac{1}{2}$. (Mas.)

Family IX. BRASSOLIDÆ.

BODY very robust.

HEAD small, clothed with closely adpressed hairs.

Eyes moderate-sized, naked.

Labial Palpi very small, and closely applied to the face.

Antennæ terminated by a large elongate-ovate club.

THORAX robust.

Wings moderate-sized, ocellated beneath.

Fore Wings with the discoidal cell of moderate length, closed.

Hind Wings with the discoidal cell closed, preceded by a small prediscoidal cell; those of the males with an elongated very narrow polished channel along the anal margin, which forms a groove for the reception of the abdomen.

Fore Legs of the male small and brush-like, with the tarsal joints obsolete.

ABDOMEN large and robust.

CATERPILLAR thickly fleshy, setose, attenuated towards the head, which is oval, the widest part being near the mouth. Terminal segment of the body entire.

CHRYsalis very thick, not angulated, convex, suspended by the tail.

The present family agrees with the Nymphalidæ, Morphidæ, and Satyridæ, in the brush-like rudimental structure of the fore feet of the males; but is distinguished from all these families by the minute palpi applied so closely to the face that they appear, when seen from above, simply as two points between the eyes. From the Morphidæ and Satyridæ they are chiefly known by the larvæ being destitute of the two elongated setose filaments or points at the extremity of the body.

The family, as here characterised, differs from the Brassolides of M. Boisduval (*Species général des Lépidoptères*, vol. i. p. 166.), by excluding therefrom the giant species of *Caligo* (or *Pavonia*), which he had united therewith; thus evidently laying greater stress on the closed condition of the discoidal cell of the hind wings, than on the structure of the palpi and antennæ, and especially on the form of the caterpillar. It is true, indeed, that there is a very close relationship between some of the Morphidæ, especially *Opsiphanes Cassiæ*, and its immediate allies, *Penetes Pamphanis*, *Brassolis Astyra* and *B. Sophoræ*, not only in the general character of the colouring and appearance of the insects, but also in the ocellated under surface of the wings; whilst the grand new insect represented in Plate LIX., under the name of *Brassolis Macrosiris*, comes very close to *Dynastor Darius*, especially in the markings of the under side of the wings.

Such considerations naturally lead to the inquiry, whether the Brassolidæ, either as here restricted to the genus *Brassolis*, or as extended to comprise *Caligo*, *Opsiphanes*, *Dynastor*, *Dasyophthalma*, *Penetes*, and *Narope* (all having a similar prediscoidal cell, and a closed discoidal cell to the hind wings), can be considered as one of the primary groups of the Diurnal Lepidoptera. The solution of this question of course involves the entire classification of the butterflies, as it can only be determined by determining the importance of the consideration of the preparatory states of the Lepidoptera; a subject which, although it has received the attention of some of the best of modern Lepidopterists, is still unsettled, and which cannot, as it seems to me, be satisfactorily solved until we obtain a much more extensive knowledge than we now possess of the transformations of exotic Lepidoptera in general.

The species of this family, like the genera of Morphidæ above enumerated, are natives of the hottest regions of the New World. They consist but of the single genus *Brassolis*.

Genus I. BRASSOLIS.

BRASSOLIS Fabricius, Godt., &c.

HEAD clothed with closely adpressed hairs, not tufted in front.

Palpi small; basal joint very much curved; apical joint exceedingly minute, scarcely visible, compressed, slightly clothed with closely adpressed hairs; erect, scarcely reaching beyond the level of the middle of the eyes, closely applied to the face; the middle joint not furnished with a tuft of hairs on the side towards the face.

Antennæ half the length of the wings. Club thick, composed of very short articulations.

THORAX robust.

Fore Wings concave, nearly straight or convex on the apical margin. Postcostal vein with its first and second branches arising before the middle of the wing; the third and fourth, near together, at about three fourths of the length of the wing. The three disco-cellular veins form a nearly continuous line, from the middle of the length of the postcostal vein to the obtuse angle of the third branch of the median vein, which is at a greater distance from the origin of this third branch than exists between the base of the first and second branches.

Hind Wings broadly ovate. Outer margin entire, rounded, not scalloped. Precostal vein forked; its anterior branch erect, with the tip slightly turned towards the body; its posterior branch forming a moderate-sized prediscoidal cell, by uniting with the angulated base of the costal vein. Postcostal vein branched at a considerable distance from the base. Discoidal cell closed at some distance beyond the middle of the wing, in an acute angle, formed by the junction of the outer disco-cellular vein with the angle of the third branch of the median vein. Under surface of the hind wings with small ocelli.

Fore Legs of the males very small, pectoral, and brush-like. Tarsus short, elongate-ovate, entire, and exarticulate.

Fore Legs of the female considerably thicker and longer. The tarsus two thirds of the length of the tibia, well articulated; the joints spined beneath; terminal joint minute, not furnished with claws.

Four Hind Legs long, rather slender. Tarsi rather longer than the tibia, very slightly spined beneath; tibial spurs small. Tarsi very slightly spined, except at the tips of the joints. Claws curved, acute. Paronychiae small, scarcely bifid.

As the three species of this genus are represented in Pl. LIX., it will be only necessary to observe that the two upper species, *B. Astyra* and *Sophoræ*, are coloured on the under side nearly as on the upper, except that the brown colour is paler, and slightly irrorated on the hind wings; the fore wings have a small black ocellus near the tip, preceded by two minute white angulated spots, and there is a very slender double waved line near the apical margin. The hind wings are marked with a small fulvous spot near the base, and with three small ocelli beyond the middle of the wings, one towards the middle of the costa. *B. Macrosiris* is much more varied on the under side; the basal half of the fore wings, and the whole of the hind wings, being fulvous-buff, marked with a vast number of slightly waved contiguous black lines; the apical half of the fore wings is purplish grey, with two large yellow and black ocelli beyond the middle, preceded by an arched white line; the middle of the costa of the hind wings is marked with a large oval fulvous-red spot, including two rows of white scales, and there are two minute round fulvous and black spots beyond the middle. This species is unique in the collection of M. Boisduval.

The transformations of *B. Sophoræ* are given by Madame Merian and Stoll, the latter author having evidently made his drawing from a specimen about to change to a chrysalis as Madame Merian's figure represents the caterpillar considerably more elongated, but in other respects agreeing with Stoll's drawing. The figures of the chrysalis given by these authors are also similar. The Caterpillar is of a clear brown colour, with blackish longitudinal lines; the fore legs and head are black, the latter marked with a yellowish transverse streak. It lives in societies of considerable numbers in a close web which it spins, from which it comes forth only during the night to eat. It is stated by most authors to feed on the *Sophora*; but according to Stoll and Merian it feeds on the *Cocoyer* and *Cacaoyer*. Its change to the chrysalis state takes place at the beginning of April, and the perfect insect appears in fifteen days afterwards. The chrysalis is of a pale colour, spotted with dark red, and marked with four silvery spots; the cast skin of the caterpillar is attached to the extremity of the body of the chrysalis. The Perfect Insect flies very swiftly, and appears only early and late in the day.

BRASSOLIS.

1. BRAS. SOPHORÆ.

Papilio Sophoræ Linneus, *Mus. Lud. Utr.* p. 266., *Syst. Nat.* ii. p. 767. n. 121.; *Clerck, Icones*, t. 35. f. 3.; *Merian, Surin. Ins.* t. 35.; *Roesel, Ins. Bel.* 4. t. 4. f. 1, 2.; *Fabricius, Syst. Ent.* p. 483., *Ent. Syst.* iii. pt. 1. p. 150. n. 459.; *Cramer, Pap.* pl. 253. f. A. B. C.; *Stoll, Suppl. Cram.* pl. 3. f. 2. A. B. (caterpillar and chrysalis); *Godart, Enc. M.* ix. p. 457. n. 1.; *Boisduval* in *Cuvier, Règne An.* ed. Crochard, *Ins.* pl. 141. f. 2.; *Lucas, Hist. Nat. Lep. Exot.* pl. 76. f. 2.; *Blanchard, Hist. Nat. Ins. Lep.* pl. 15. f. 3.; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 59. f. 2.

Surinam, Brazil.

B. M.

2. BRAS. ASTYRA.

Brassolis Astyra Godart, *Enc. M.* ix. p. 457. n. 2.; *Boisduval, Spec. Gen. Lep.* i. pl. 13. f. 2.; *Guérin, Icon. R. An. Ins.* pl. 79. f. 4.

Brazil.

B. M.

3. BRAS. MACROSIRIS.

Brassolis Macrosiris Boisduval MS.; *Doubl. Westw. & Hewitson, Gen. Diurn. Lep.* pl. 59. f. 3.

Cayenne.

Family X. SATYRIDÆ.

SATYRI *Latreille, Hist. Gen. Ins.* xiv. p. 97. (1805.)

SATYRIDES *Boisduval, Sp. Gen. Lep.* p. 166.

SATYRIDÆ *Swainson (pars); E. Doubleday, List Lep. Brit. Mus.* p. 119.

SATYRIDI *Stephens, Cat. Brit. Lep. Brit. Mus.* p. 6.

HIPPARCHIA *Fabricius, Syst. Lep. (Illig. Mag. vi. 1807.)*

HIPPARCHIIDES *Westwood, Introd. to Class. Mod. Lep. Gen. Synopsis*, p. 88.

MANIOLA *Schrank.*

EREBIA *Dalman.*

DRIADES *Hübner.*

BODY generally small and weak.

HEAD small.

Eyes naked, or hairy.

Antennæ generally short and slender, variable in the form of the club.

Labial Palpi very much compressed, more or less elongated and erect, and clothed in front with long porrected hairs.

WINGS generally large, but weak in structure, and generally ocellated on the under side.

Fore Wings often with the veins at the base swollen. The postcostal vein with its branches free; the first and second emitted before the anterior extremity of the discoidal cell, which is generally long, and always closed.

Hind Wings with the discoidal cell closed, and not preceded by a prediscoidal cell. The anal margin forming a gutter for the reception of the abdomen. Upper surface not, or very rarely, fasciculated.

Fore Legs very small. Those of the males brush-shaped, with exarticulate tarsi; and those of the females rather longer, more scaly, and with the tarsi articulated. Claws of the *hind legs* often bifid.

LARVA attenuated at the extremity of the body, and almost pisciform, tomentose, terminated by two more or less prominent anal points; the head rounded, sometimes emarginate or bifid, or sometimes surmounted by two spines. Generally graminivorous.

CHRYsalIS short, cylindric, not or scarcely angulated, and not girt; suspended by the tail.

This family, or rather subfamily, as I should prefer to regard it, differs from the two preceding groups in the elongated very pilose palpi, the want of a prediscoidal cell to the hind wings, and the general weakness of the insects; whilst the structure of the larva separates it from the Brassolidæ, but approximates it to the Morphidæ, and some of the latter genera of Nymphalidæ. This family is of considerable extent, and almost universally dispersed over the surface of the globe; the number of the European species is, in fact, considerably greater than one third of the whole of the Diurnal Lepidoptera of Europe. They are generally of a small or but moderate size, and of obscure colours; but the under surface of the wings is in almost all the species ornamented with eye-like spots. The discoidal cell of all the wings is always closed, whilst the base of one or more of the longitudinal veins of the fore wings is dilated and vesiculose; indeed, Godart even states that every species of the group, both exotic and indigenous, has the first two veins of the fore wings in this condition. The club of the antennæ is generally curved, slender, and spindle-shaped, but it is very distinct in some species; *S. Circe* and *Hermione*, for example, two species otherwise closely allied, differ from each other in this respect. The Caterpillars, however, offer the most characteristic mark of distinction, being attenuated behind; the body terminated in a fork or two small points, destitute of spines, but generally pubescent; the head more or less rounded, sometimes heart-shaped, and sometimes armed with two spines. The Chrysalis is simple or but very slightly angulated, and almost destitute of prominent tubercles. The Caterpillars almost exclusively feed upon grasses; and hence it is that the species are so widely dispersed in their geographical distribution. It is but rarely that these Caterpillars are met with by entomologists, on account of their peculiar habit of feeding only during the night; and some species, according to M. Marloy (*Ann. Soc. Ent. France*, 1838), retire to the earth to undergo their Chrysalis state; those of *S. Circe*, *Briseis*, *Semele*, and *Fidia* forming large oval cocoons, composed of grains of earth mixed with a little silk. Those of *S. Mœra*, *Janira*, and others, however, suspend themselves by the tail, as usual with almost all butterflies which have the fore legs imperfect.

M. Duponchel, in a memoir published in the *Annals of the French Entomological Society* for 1833, has divided the European species of this group (which he regarded as forming but a single genus) into the nine following sections, named from the habits of the Perfect Insects, and characterised by the variations in the dilated condition of the base of the veins of the wings, and the form of the antennæ. His sections are:

- | | |
|------------------|---|
| 1. GRAMINICOLES. | <i>S. Lachesis, Galathea, Clotho, &c. (Genus Arge.)</i> |
| 2. ERICICOLES. | <i>S. Actæa, Bryce, Phædra.</i> |
| 3. RUPICOLES. | <i>S. Fidia, Fauna, Circe, Briseis, Semele, Anthelea, &c.</i> |
| 4. HERBICOLES. | <i>S. Eudora, Janira, Clymene, Tithonus, &c.</i> |

- | | |
|----------------|--|
| 5. VICICOLES. | S. Roxelana, Mœra, Megæra, Tigelius, Ægeria. (Genus Lasiommata.) |
| 6. RAMICOLES. | S. Dejanira, Hyperanthus. |
| 7. DUMICOLES. | S. Œdipus, Hero, Arcanius, Iphis, Davus, Pamphilus, &c. (Genus Cœnonympha.) |
| 8. ARCTICOLES. | S. Aello, Norna, Tarpeia, Bore, Bootes, Phryne. (Genus Chionobas.) |
| 9. ALPICOLES. | S. Epiphron, Melampus, Cassiope, Mnestra, Blandina, Ligea, &c. (Genus Erebia.) |

Such a classification, although very useful as regards the European species, can scarcely be applied to the entire family; nor are, indeed, M. Duponchel's groups of equal importance.

Genus I. DYCTIS.

DYCTIS *Boisduval*.

HYADES p. *Boisduval*.

MORPHO p. *Guérin-Ménéville*.

BODY small, downy; wings large, with all the cells closed; fore wings with the costal vein dilated at the base; hind wings with a minute prediscoïdal cell.

HEAD wide, slightly hairy, not tufted in front.

Eyes large, naked.

Antennæ about two fifths of the length of the fore wing, very slender, and terminated by a long and gradually formed, but very slender, club, finely carinated beneath.

Labial Palpi porrected forwards to about the length of the head, and directed obliquely upwards, but not reaching the level of the tops of the eyes; hairy beneath at the base; the long second joint also hairy on the back towards the face, the front very slightly hairy; terminal joint distinct and slender.

THORAX rather small, compressed, and pulverose, slightly hairy.

Fore Wings large, triangularly ovate. Costal margin arched; apical angle rounded. Apical margin convex, very slightly scalloped; inner angle rounded. Inner margin nearly straight in both sexes. Costal vein reaching to half the length of the costa, considerably swollen at the base of the wing. Subcostal vein slender; with the first and second branches arising before the anterior extremity of the discoidal cell; third branch arising at about three fifths, and fourth branch arising at about three fourths, of the length of the wing; this fourth branch extending to the tip of the wing. Upper disco-cellular vein extremely short, arising at about three sevenths of the length of the wing; middle disco-cellular short, oblique, directed backwards towards the base of the wing; lower disco-cellular nearly four times as long as the middle one, very much curved inwardly, emitting, at equal distances apart, two very delicate veinlets, running into the discoidal cell, uniting together at a short distance from the base of the wing; the lower disco-cellular unites with the median vein close to the base of its third branch, which is considerably and regularly curved. Postmedian vein rather sinuated towards the base of the wing.

Hind Wings broadly ovate, somewhat angulated at the outer angle. The costal margin rounded. The apical margin slightly scalloped; anal angle rounded. Anal margin deeply grooved. Costal vein scarcely extending beyond one third of the length of the costa. Precostal vein forked: the upper branch of the fork straight, short, and erect; the lower branch oblique, and uniting with the costal so as to form a small prediscoïdal cell. Postcostal vein with its branch arising at about two sevenths of the length of the wing; the branch short, and extending only to about two thirds of the costa. Upper disco-cellular short, curved; somewhat more transverse than represented in our figure, as is also the much longer lower disco-cellular; the latter joins the median vein exactly at the origin of the third branch, which is much curved. The disc of the hind wings is furnished on the upper side, in the males, with a long narrow patch, within the outer edge of the discoidal cell, clothed with long silky hairs, which is ordinarily covered by the hind margin of the fore wings. The base of the costal and postcostal veins are also dilated beneath in this sex.

Fore Legs of the male very small and slender. The tibia and tarsus slightly attenuated and scarcely pilose.

Fore Legs of the female rather longer than those of the male. The tibia and tarsus gradually dilated and compressed. The tarsus obliquely truncate at the tip, and furnished with several minute spines in the truncated part, indicating the articulations, which are concealed by the thick scales.

Four Hind Legs wanting in the specimens examined.

ABDOMEN small, and moderately robust.

The two insects upon which M. Boisduval has suggested the establishment of the present genus are natives of New Guinea; and will probably hereafter be ascertained, as he ingeniously suggests, to be the sexes of but one species. That which is represented in our Pl. LIV*, fig. 4, is a female; the under side differing only from the upper in the discoidal patch of the hind wings being much larger,

the black colour with a clearly defined margin edged with fulvous, and the costa of the hind wings broadly fulvous brown. The opposite sex (*D. Agondas*) has all the appearance of a large, uniformly coloured, sooty black *Satyrus*. It might indeed almost be mistaken at first sight for a specimen of our *Pronophila Cordillera*. On the upper side it is of a sooty black, the apical margins of the wings with an obscure greenish ashy tinge; the costa, especially towards the apical angle, having a rather more green tinge. On the under side the wings are entirely blackish brown, except a large transverse-oval fulvous patch near the anal angle, bearing a large round and a smaller oval spot, both black, with blue scales in the middle (forming a double pupil in the larger one next the anal angle).

The position of the genus is very doubtful, from the peculiar characters of the insects, of which the most remarkable are, the palpi scarcely hirsute in front, the dilated costal vein of the fore wings in both sexes, the silky patch on the disc of the hind wings of the males, the small prediscoidal cell of the hind wings, as well as the regular ocellation of the under side of the hind wings in the males; whilst the female has these wings marked much more like those of the genus *Drusilla*. With such a combination of characters, it cannot exclusively be associated either with the *Nymphalidæ*, *Morphidæ*, or *Satyridæ*. We have to return our best thanks to Dr. Boisduval for the use of his unique specimens of these two remarkable insects.

DYCTIS.

1. *Dyc. AGONDAS*.

Dyctis Agondas Boisduval, Voy. de l'Astrolabe, Entomologie, 1re part. p. 138. pl. 3. f. 5. Vanikoro.

2. *Dyc. BIOCULATUS*.

Morpho bioculatus Guérin, Voy. de la Coquille, Zoologie, Atlas, Ins. pl. no. 17. f. 1.

Dyctis bioculatus Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 54. f. 4.*

Hyades Indra Boisduval, Voy. de l'Astrolabe, Entomologie, 1re part. p. 158.; Guérin, Voy. Coq. p. 282.

[An *Dyctis Agondas* fem.?] New Guinea.

Genus II. CORADES.

CORADES Boisduval, MS., E. Doubl., Hewits.

“HEAD of moderate width, hairy.

Maxillæ about two thirds the length of the body, rather slender.

Labial Palpi porrect, ascending, longer than the head, clothed with hairs and scales; the scales at the back of the second joint forming a tuft before the apex. First joint short, subcylindric, curved, stoutest at the base; second joint three times the length of the first, subcylindric, slightly curved at the base, incrassated towards the apex, which is truncate; third joint slenderer than the second, about half its length, nearly cylindric, obtuse at the apex.

Eyes nearly round, not very prominent, smooth.

Antennæ less than two thirds the length of the body, slender, grooved below, thickening gradually into a slender obtuse club.

“THORAX moderately stout.

Anterior Wings subtriangular. Anterior margin slightly arched. The outer nearly straight, three fifths of the length of the anterior. Inner margin nearly straight, four fifths of the length of the anterior. Costal nervure swollen at its origin, terminating beyond the middle of the anterior margin. Subcostal nervure rather slender; throwing off its first nervule at a short distance before, its second immediately before, the end of the cell; the third at a point about as far beyond the end of the cell as the origin of the first is before it; its fourth about as far beyond the third as the origin of this last is distant from the origin of the second; fourth subcostal nervule terminating at the apex of the wing. Upper disco-cellular nervule very short; middle and lower disco-cellular nervules about equal, the former curved inwards, the latter outwards; a rudimentary discoidal nervule extending inwards from the middle disco-cellular nervule. Median nervure swollen at its base; its third nervule bent at a considerable angle where it is joined by the lower disco-cellular. Submedian nervure stout, curved near the base. Internal nervure wanting.

Posterior Wings obovate, produced into a short tail at the anal angle. The anterior margin nearly straight; the outer much curved; the abdominal fold ample. Precostal nervure stout, curved inwards. Costal nervure rather stout, curved at its origin. Subcostal nervure rather stout, bent at a considerable angle where the costal separates from it; its second nervule angular, where the straight upper disco-cellular nervule anastomoses with it. Discoidal nervule extending into the cell. Lower disco-cellular nervule straight, longer than the upper, anastomosing with the discoidal nervure a long way beyond the anastomosis of the upper disco-cellular. Third median nervule bent at nearly a right angle where the lower disco-cellular anastomoses with it.

Anterior Legs of the male slender, thinly clothed with scales and long delicate hairs. The femur rather shorter than the tibia. The tarsus little more than two thirds the length of the tibia, one-jointed, nearly cylindric.

Anterior Legs of the female rather slender, clothed with scales and a few long fine hairs. Femur and tibia of about equal length, the latter nearly cylindric; the apex slightly stoutest, thinly spiny both within and without. Tarsus shorter than the tibia, five-jointed; the first joint more than twice the length of the rest combined; these all transverse: first to fourth bispinose at the apex; second and fifth with a tuft of hair on each side at the base.

Middle and Posterior Feet with the femora rather stout. The tibiæ very spiny all round; their spurs stout. The tarsi densely spiny above, and, except the fifth joint, spiny below; the spines below arranged somewhat in two series. The first joint longer than the rest combined; second about one third the length of the first; third three fourths the length of the second; fourth rather more than half the length of the third; fifth not quite so long as the third. Claws curved, acute, grooved below. Paronychia bilacinate; the outer lacinia slender, pointed, not so long as the claw; the inner lancet-shaped, much broader than, and nearly as long as, the outer, very hairy. Pulvillus jointed, broad, not so long as the claws.

"ABDOMEN rather short, not robust.

"This interesting genus appears to be almost confined to the eastern slopes of the Andes, and to the great branch of that mountain range which runs along the northern parts of South America. Nearly all the specimens of the five or six species belonging to it, existing in British collections, were sent home by Mr. Bridges from the eastern parts of Bolivia, and by Mr. Dyson from Caraccas. The peculiar sexual scales on the disc of the anterior wings of the males resemble those of the males in most species of this family, in being long, tapering to a delicate hair-like point, at the end of which is a little plumelet.

"In form, this genus approaches the *P. Actorion* of Linnaeus [*Bia Actorion*, *ant.*, p. 322.]; but that insect belongs to the preceding family of *Morphidae*."—*E. Doubleday*, in *Illustr. Proceedings of the Zool. Soc.* 1848.

In addition to the preceding characters and observations given by Mr. E. Doubleday, it may be stated, that no other species in the present family has the hind wings so much elongated at the anal angle (the tail being traversed by the extremity of the first branch of the median vein); that the colours of the upper surface of the wings are rich chestnut and brown, with orange spots on the fore wings; and that the tips of the fore wings beneath, and the whole of the disc of the hind wings, are much freckled transversely, the latter being paler-coloured, with two oblique slender bars running across the wings, the outer one followed by a pale bar; the ocelli wanting, or reduced to minute circular dots on the hind wings alone.

CORADES.

1. COR. ENYO.

Corades Enyo *Hewits*, in *Ill. Proc. Zool. Soc.* July 25.
1848, p. 117., *Annulosa*, pl. iv.
Caraccas.

B. M.

2. COR. IDUNA.

Corades Iduna *Hewits*, *MS.*; *Doubl. Westw. & Hewits*,
Gen. Diurn. Lep. pl. 63. f. 1.; *Hewits*, in *Annals &*
Mag. N. Hist. ser. 2. vol. vi. p. 437.
Bolivia.

B. M.

3. COR. PANNONIA.

Corades Pannonia *Hewits*, *Ann. & Mag. N. Hist.* ser.
2. vol. vi. p. 438. pl. 10. f. 1, 2.
Venezuela.

B. M.

4. COR. ULEMA.

Corades Ulema *Hewits*, *op. cit.* vol. vi. p. 438. pl. 10.
f. 3.
Bolivia.

B. M.

5. COR. MEDEBA.

Corades Medeba *Hewits*, *op. cit.* vol. vi. p. 439. pl. 10.
f. 4.
Bolivia.

B. M.

6. COR. SAREBA.

Corades Sareba *Hewits*, *op. cit.* vol. vi. p. 439. pl. 10.
f. 5.
Bolivia.

B. M.

Genus III. TAYGETIS.

TAYGETIS *Hübner*, *Verz. bek. Schm.*
OREADES MARMOREÆ *Hübner*, *Samm.*
FAUNUS *Blanchard*, *Voy. d'Orbigny*.
SATYRUS *Sect. F. G. & H. p. Godt.*
SATYRUS *E. Doubleday*, *List. Lep. Brit. Mus.*

BODY elongate, slender; wings large; fore wings often pointed at the tip; hind wings generally scalloped or dentate.
HEAD of moderate size, hairy, with a slight frontal tuft.

Eyes prominent, naked.

Antennæ short, slender, not more than two fifths of the length of the fore wings; terminated by a long and gradually formed rather slender club, composed of very short joints, finely carinated beneath at the sides.

Labial Palpi porrected upwards, ascending as high as, or higher than, the level of the top of the eyes, scaly on the back, which has a small brush in the middle of the second joint; the front furnished with a dense, greatly compressed, brush of long scaly hairs; terminal joint slender, distinct, with a few scaly hairs.

March 1. 1851.

THORAX short, oval, very hairy.

Wings with the disc on the upper side clothed with short hairs.

Fore Wings elongate-triangular. Fore margin arched; apical angle variable. Apical margin generally slightly convex, or nearly straight; inner angle rounded. Inner margin nearly straight. Costal vein dilated at the base, extending a little beyond the middle of the costa. Postcostal vein slender, with its branches free; the first arising a little before, and the second quite close before, the anterior extremity of the discoidal cell; third branch arising at about two thirds, and extending to the costa at about five sixths, of the length of the wing; fourth branch arising just opposite to the extremity of the third, and extending to the apical angle. Upper disco-cellular vein extremely short, transverse, arising at about the middle of the fore margin of the wing: middle disco-cellular of considerable length, curved, its tip extending outwards: lower disco-cellular about equal in length to the middle one, straight, very slightly oblique, uniting with the third branch of the median vein, at a little distance beyond the middle of the wing; the third branch forming an angle at the place of junction, which is at the same distance from the origin of this third branch as exists between the second and third branches. Median vein swollen at the base.

Hind Wings large, triangularly ovate. Costal margin emarginate at the base, regularly curved. Apical margin variable, but generally with the three branches of the median vein more or less prolonged at the tips, so as to cause the portion next the anal angle to be more or less scalloped or dentate. In *T. Mermeria* the outer margin is rounded, but in *T. Chelys* the extremity of the costal margin is more dilated; so that the costal vein, which, in the former, extends only about two thirds of the length of the costa, reaches to its apex in the latter. Precostal vein much curved, and directed outwardly from the body. Postcostal vein arising just opposite to the precostal. Upper disco-cellular vein twice as long as the space between the two branches of the postcostal vein; outer disco-cellular still longer, less oblique, and uniting with the third branch of the median vein at about half the distance from its base as the length of the outer disco-cellular itself.

Fore Legs of the male small and very hairy. The femur and tibia of about equal length; the former with a thick terminal brush. Tarsus about two thirds of the length of the tibia, exarticulate, as hairy as the tibia.

Fore Legs of the female considerably longer than those of the male, and thickly hairy throughout (but less so than in the male); the articulations of the tarsus being hidden by the hairs, and only indicated by a few small spines on the under side seen through the hairs.

Four Hind Legs long, scaly. Tibia as long as the femur, slightly curved. Tarsus as long as the tibia; the joints very distinct, scaly. Tibial spurs moderately strong. Claws very much curved and acute, slightly dilated at the base. Paronychialia very minute and membranous, bifid; the outer division very slender; the inner one triangular. Pulvillus obcordate, leathery.

ABDOMEN elongate.

CATERPILLAR rather short, setose; head conical, and much elevated, hairy, a pair of long acute spines directed backwards on the back of the middle of the body, and two pairs of similar spines towards the extremity of the body, which is furnished with two long very hairy tubercles or points.

CHRYSA LIS elongate-ovate, without conical protuberances; head terminated by two conical points.

This is a group of large-sized Satyridæ, natives of the hottest parts of South America, remarkable for the dull uniform brown colouring of the upper surface of the wings; the only variation in this respect consisting in the broad orange margin to the hind wings of the species selected to illustrate the genus (*T. Chrysogone*, Pl. LX. f. 4.), and an indistinct fulvous patch beyond the middle of the fore wings in *T. Echo*. In *T. Mermeria*, which may be considered as a good type of the genus, and which has supplied the above generic characters, the male has the fore wings terminating in a point; whilst in the female they are prolonged into a narrow appendage at the tip. *T. Mermeria* has the margin of the hind wings scarcely scalloped; whilst *T. Chelys* has them even more strongly dentate than *T. Chrysogone*. The middle of the wings, in the majority of the species, on the under side, is separated from the base and apex by two dark nearly straight bars, beyond which is a row of minute round dots, which are dilated into ocelli in *T. Andromeda*. In a few species, *T. Chelys*, &c., the under side of the wings is more clouded and irrorated, and the dark streaks more irregular.

The caterpillar represented by Stoll (*Suppl. to Cramer, Pap.* pl. 7. f. 1.) is so unlike all the known larvæ of the family, that we should be inclined to doubt its accuracy, were not the scrupulous care of the author so well known. The pupa reminds us of that of some of the *Morphidæ*; as do also the spines on the back of the caterpillar. If there be no mistake in this respect, we have here an additional proof of the intimate relation of the *Morphidæ* and *Satyridæ*.

TAYGETIS.

1. *Fore Wings acute or prolonged at the tip.*

1. TAYG. MERMERIA.

Papilio Mermeria Cramer, *Pap.* t. 96. f. B, t. 289. f. E. F.; Stoll, *Suppl. Cram.* pl. 7. f. 1. 1 A., larva and pupa; Hübner, *Samml. exot. Schm.* Band ii. pl. — (Taygetis M.); Godart, *Enc. M.* ix. p. 485. n. 23. (*Satyrus* M.).
Faunus tenebrosus Blanchard in *Voy. d'Orbigny*, p. 222. pl. 32. f. 1, 2.
Brazil, Guiana.

B. M.

2. TAYG. YPTHIMA.

Taygetis Ypthima Hübner, *Samml. exot. Schm.* Band ii. pl. —.
Brazil. B. M.

3. TAYG. CHELYS.

Papilio Chelys Fabricius, *Ent. Syst.* iii. pt. 1. p. 80. n. 249.; Jones, *Icones*, iii. t. 78. f. 2.; Godart, *Enc. M.* ix. p. 484. n. 21. (*Satyrus* Ch.).
Brazil. B. M.

II. Fore Wings with the apical angle rounded or subtruncate.

TAYG. REBECCA.

Papilio Rebecca Fabricius, *Ent. Syst.* iii. pt. 1. p. 75. n. 236; Godart, *Enc. M.* ix. p. 484. n. 22. (Satyrus R.).

Papilio Virgilia Cramer, *Pap.* pl. 96. f. C.

Taygetis Virgilia Hübner, *Verz. bek. Schm.* p. 55. n. 529. Brazil, Guiana. B. M.

5. TAYG. ANDROMEDA.

Papilio Andromeda Cramer, *Pap.* pl. 96. f. A.; Doubl. *List. Lep. Brit. Mus.* p. 119. (Satyrus A.).

Papilio Laches Fabricius, *Ent. Syst.* iii. pt. 1. p. 229. n. 719; Jones, *Icon.* iii. t. 81. f. 2; Donovan's *Drawings in Bibl. Hope, Oxford*; Godart, *Enc. M.* ix. p. 485. n. 24.

Papilio Thamyra Cramer, *Pap.* pl. 242. f. B.

Oreas marmorea Thamyra Hübner, *Samml. exot. Schm.* Band i. pl. —.

Taygetis fatua Hübner, *Verz. bek. Schm.* n. 532. Brazil, Guiana. B. M.

6. TAYG. CELIA Cramer, *Pap.* pl. 485. f. C.; Godart, *Enc. M.* ix. p. 485. n. 25. (Satyrus C.).
Guiana, Demerara? B. M.

7. TAYG. PENELEA.

Papilio Penelea Fabricius, *Spec. Ins.* ii. p. 35., *Ent. Syst.* iii. pt. 1. p. 92. n. 286; Cramer, *Pap.* pl. 101. f. 6; Godart, *Enc. M.* ix. p. 486. n. 28. G

Brazil, Guiana, St. Lucia.

B. M.

8. TAYG. ECHO.

Papilio Echo Fabricius, *Spec. Ins.* t. ii. p. 91. n. 399., *Ent. Syst.* iii. pt. 1. p. 180. n. 368; Cramer, *Pap.* pl. 57. f. C. D.

Surinam, Brazil.

B. M.

9. TAYG. VALENTINA.

Papilio Valentina Cramer, *Pap.* pl. 242. f. A.; Godart, *Enc. M.* ix. p. 486. n. 26. Guiana.

10. TAYG. ORCUS.

Satyrus Orcus Latreille in *Humb. & Bonpl. Obs. Zool.* ii. p. 72. pl. 35. f. 1, 2.

Satyrus Orchamus Godart, *Enc. M.* ix. p. 486. n. 27.

Peru.

B. M.

11. TAYG. CHRYSOGONE.

Taygetis Chrysogone E. Doubl. *MS.*; Doubl. *Westw. & Hewits. Gen. Diurn. Lep.* pl. 60. f. 4.

Venezuela?

B. M.

Genus IV. PRONOPHILA.

PRONOPHILA E. Doubleday MS.

MYGONA Boisduval MS.

BODY small, hairy; wings large; hind wings more or less scalloped or dentate, beautifully variegated beneath with a broad irregular dark central fascia.

HEAD rather small, hairy, with a conical frontal tuft.

Eyes moderately prominent, hairy.

Antennæ short, not or scarcely more than two fifths of the length of the fore wings, very slender; terminated by a slender elongated club, formed of short joints, with the tip deflexed.

Labial Palpi elongated, obliquely porrected upwards, extending forward more than the length of the head, and elevated above the level of the top of the eyes, compressed; the second joint clothed on the back with short hairs (without a dorsal tuft), and in front with long hairs set on at right angles, not forming a dense flattened mass as in Taygetis; terminal joint continuous with the preceding.

THORAX short, oval, hairy.

Fore Wings large, elongate, triangularly oval. Fore margin well arched; apical angle rounded. Apical margin generally slightly concave, arising from being rather angulated below the apex; the margin very slightly scalloped. Inner margin straight. Costal vein swollen at the base; united with the costa just beyond the anterior extremity of the discoidal cell. Postcostal vein with the first and second branches arising before the anterior extremity of the same cell; the third branch arising at a greater or less distance beyond the cell, and the fourth extending to the tip of the wing. Upper disco-cellular vein extremely short, arising at a little distance beyond the middle of the length of the wing: middle disco-cellular much longer, strongly angulated in the middle, the angle being towards the base of the wing, and throwing off a false vein, which runs nearly to the base of the discoidal cell: outer disco-cellular vein about as long as the middle one, straight, nearly transverse; uniting with the third branch of the median vein at the same distance from its base as exists between the second and third branches; the third branch being strongly angulated at the place of junction, beyond which it is nearly straight, the discoidal cell being closed considerably beyond the middle of the wing.

Hind Wings broadly ovate and very large, or of moderate size; in the former case being more or less scalloped, and in the latter more dentate, along the apical margin. Precostal vein short, erect, and nearly straight. Costal vein extending quite close to the costa, to about two thirds of its length. Postcostal arising just opposite to the precostal, branching at a considerable distance from its base. The upper disco-cellular arising at a very short distance beyond the branch, about one fifth of the length of the wing, angulated near its base; the angle throwing off a veinlet, which extends to the base of the discoidal cell: lower disco-cellular short, transverse, joining to the third branch of the median vein (which is angulated at the place of junction) at the same distance from the origin of the third median branch as its own length.

Fore Legs of the male very minute and delicate, clothed with long and very fine hairs. The tarsus two thirds of the length of the tibia. *Fore Legs* of the female very small (but larger than those of the male), slender, scaly.

The tibia rather shorter than the femur; and the tarsus shorter than the tibia, a little thickened at the tip, which is setose and truncate, the joints being hidden by scales.

Four Hind Legs rather short and robust. Femur slightly curved, woolly beneath. Tibia and tarsus scaly, thickly armed with numerous short robust spines, those at the sides beneath arranged in rows. Ungues very strongly hooked and acute at the tips.

ABDOMEN small.

The insects of this genus, like *Corades* and *Taygetis*, are natives of the tropical parts of the New World; Columbia, Venezuela, and the Amazon district being their chief localities. They are at once distinguished from the preceding genus by the longer, less densely hairy labial palpi, the hairy eyes, dilated costal vein, angulated middle disco-cellular vein of the fore wings, elongated and angulated upper disco-cellular vein of the hind wings, and strongly spined hind legs. The majority of the species (of which there are several still undescribed in our collections in addition to those in the subsequent list, recently introduced by Messrs. Bridges, Dyson, Bates, and Wallace) are of black or brown colours on the upper side of the wings, and but little varied with pale patches; on the under side, on the contrary, their colours are very rich and variegated, especially on the hind wings, which generally bear an irregularly shaped, central, rather oblique, broad fascia, followed by a row of ocelli. There is considerable difference in the form of the wings: *P. Thelebe* and its allies having the fore ones rounded at the tip and the hind wings scalloped, whilst in *P. Irimina* and *Tauropolis*, &c., the fore wings are more or less angulated below the tip, and the hind wings are more or less deeply scalloped.

The whole of the species appear to be, up to the present time, undescribed; I have accordingly given descriptions of a few of the more striking species, in addition to those figured in our plates.

PRONOPHILA.

1. PRON. THELEBE.		5. PRON. IRMINA <i>E. Doubleday MS.; Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 60. f. 2.</i>	
Pronophila Thelebe <i>E. Doubl. MS.; Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 60. f. 3.</i>		Satyrus Sebera <i>Moritz MS.</i>	
Columbia.	B. M.	Venezuela.	B. M.
2. PRON. CORDILLERA <i>Westw. nov. sp.*</i>		6. PRON. TAUROPOLIS.	
Western Brazil.	B. M.	Pronophila Tauropolis <i>Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 66. f. 1.</i>	
3. PRON. PUERTA <i>Westw. nov. sp.†</i>		Mygona Tauropolis <i>Boisduval MS.</i>	
Columbia, Venezuela.	B. M.	Oajaca.	Mus. Bdv.
4. PRON. ZAPATOZA <i>Westw. nov. sp.‡</i>		7. PRON. PHORONEA.	
Bolivia, Venezuela.	B. M.	Pronophila Phoronea <i>E. Doubleday MS.; Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 60. f. 1.</i>	
		Columbia.	B. M.

* *Pronophila* alis anticis apice rotundatis, posticis repandis; supra nigro-fuscis; subtus anticis castaneis apice late fusciscentibus, ocellis septem nigris albo pupillatis; duobus anticis minutis, reliquis quinque magnis; alis posticis fusciscentibus, fusco-nebulosis, fascia lata irregulari oblique transversa fusca media, ocellis octo parvis nigris albo pupillatis, duobus ad angulum ani contiguis, margine communi obscuriori. *Expans. alar. antic. unc. 3½.*

† *Pronophila* alis anticis magis elongatis apice rotundatis, integris, posticis repandis; supra fuscis, fascia communi parum irregulari (in alis posticis latiori), ex angulo anali posticarum fere ad apicem anticarum extensa, rufa, in qua series interrupta punctorum nigrorum; alis subtus castaneis, anticis fascia subapicali pallidiori, macula albida triangulari costali terminata alteraque parva albida sericque punctorum nigrorum, antico albo pupillato; posticis striga obliqua flavescenti ante medium, fascia lata flava, extus dentata et argentea, ocellis septem nigris albo pupillatis (nonnullis flavido cinctis) in maculas castaneas quadratas dispositis. *Expans. alar. antic. unc. 2¾.*

‡ *Pronophila* alis anticis apice rotundatis, posticis profunde repandis, supra ferrugineis, anticis margine apicali irregulari fusca, in qua striga obliqua irregulari maculisque duabus aurantio-rufis, posticis pone medium maculis quinque rotundatis margineque fuscis; anticis subtus fere ut supra coloratis apice magis griseo, posticis basi griseis dimidio apicali fusco-nebulosis, macula magna fusca costali ad medium alæ extensa, strigaeque dentata alba abbreviata ex angulo anali extensa. *Expans. alar. antic. unc. 2.*

Genus V. DEBIS.

DEBIS *Boisduval MS.*

LETHE *Hübner, Verz. bek. Schm.*

OREAS MARMOREA *p. Hübner, Samml.*

SATYRUS Sect. A. *p. Godt.*

CYLLO *p. E. Doubl. List Lep. Brit. Mus.*

BODY rather small; wings large, the hind ones generally angulated in the middle, with a row of large ocelli. HEAD rather small, scarcely tufted in front.

Eyes prominent, especially in the males, hairy.

Labial Palpi rather elongated, elevated obliquely as high as, or higher than, the level of the top of the eyes, and porrected to a short distance in front of the face; the long middle joint without any tuft on the back, clothed in front with moderately short fine hairs, not forming a close mass; terminal joint very short and slender.

Antennæ not, or scarcely, half the length of the fore wings, very slender; terminated by a slender gradually formed club, composed of very short joints.

THORAX very short, thick, and hairy.

Fore Wings triangular-ovate. Fore margin strongly curved; apical angle rounded. Apical margin straight, or but little emarginate, about three fifths of the length of the anterior. Inner margin nearly straight, about as long as the apical. Costal vein dilated at the base, extending rather beyond the middle of the costa. Subcostal vein with its first and second branches arising before the anterior extremity of the discoidal cell; the third and fourth beyond it, about the same distance apart as between the origin of the second and third branches, and of the fourth branch and the tip of the wing. Upper disco-cellular vein very minute, oblique; middle disco-cellular much longer, curved at the extremity, being directed rather outwards; outer disco-cellular longer than the middle one, nearly straight, also directed obliquely outwards, uniting with the third branch of the median vein at about the same distance from its origin as exists between the first and second branches; the third branch being considerably angulated at the point of junction, whereby the discoidal cell is closed somewhat acutely rather beyond the middle of the wing.

Hind Wings subovate, more or less scalloped along the outer margin, which is generally deeply angulated, or rather shortly tailed at the extremity of the third branch of the median vein. Precoastal vein curved, the tip directed outwards. Costal vein extending to about two thirds of the length of the costa. First branch of the postcostal vein arising at a moderate distance from its base, the extremity extending to the outer angle of the wing. Upper and lower disco-cellular veins oblique, curved, of nearly equal length; the upper one arising at a short distance from the origin of the first branch of the postcostal vein; the lower one uniting with the median vein close to, or exactly at, the origin of the third branch, closing the discoidal cell in an acute point.

Fore Legs very minute, and thickly clothed with long silky hairs. The tarsus slender, as long as the tibia, and destitute of joints or claws. *Fore Legs* of the female rather longer than those of the male, slender, scaly, destitute of hairs, of nearly equal thickness throughout; the tarsal articulations concealed by scales: obliquely truncate at the tip, where are a few short spines indicating the very short terminal joints.

Four Hind Legs rather short, slender, scaly. Tibia but very slightly furnished with a few short spines; tibial spurs rather long. Tarsi nearly cylindrical; basal joint half the length of the tarsus, with but a few very short spines on the under side. Ungues very much curved. Paronychia very slender.

ABDOMEN small.

CATERPILLAR (of *D. Portlandia*) long, subcylindrical, longitudinally striated; the head with two erect horns; and the body terminating in two obliquely porrected points.

CHRYSA LIS short, thick, rather constricted across the base of the abdomen; head-case obtusely rounded.

The hairy eyes, slender elongated palpi, dilated base of the costal vein of the fore wings, the middle and outer disco-cellular veins of nearly equal length, and the acute termination of the discoidal cell of the hind wings by the junction of the outer disco-cellular vein with the median vein at the origin of its third branch, are the chief characters of this genus, the species of which are, for the most part, natives of the East Indies, or islands of the Eastern Archipelago; the only exception, in fact, being the North American *D. Portlandia*, the transformations of which have been illustrated by Messrs. Boisduval and Leconte, in their work on the Lepidoptera of North America, and which differs from the other species in having the upper surface of the fore, as well as the hind, wings marked with large ocelli. This species, indeed, approaches very closely to the genus *Lasiommata*; but its fore wings are somewhat concave along the apical margin, and the hind wings are angulated in the middle of the outer margin.

The typical species, *D. Europa*, is marked on the under side of the hind wings with a series of large eyes, the centre of each of which is marked with irregular black patches irrorated with white scales.

There are several undescribed species in our collections which I have not thought it necessary to enter in the following list. I have added *D. Arcadia* to the genus, although Cramer's pl. 116. f. F. does not indicate the position of the outer disco-cellular vein of the hind wings with sufficient precision to enable me to be certain as to its position. By Hübner it was ranged near the *Vanessæ*.

DEBIS.

1. DEB. EUROPA.

Papilio Europa Fabricius, Syst. Ent. p. 500., Ent. Syst. iii. pt. 1. p. 76. n. 238.; Godart. Enc. M. ix. p. 478. n. 6.

Lethe Europa Hübner, Verz. bek. Schm. n. 534.

Oreas marmorea Europa Hübner, Samml. exot. Schm. Bd. i. pl. —.

Papilio Beroe Cramer, Pap. pl. 79. f. C. D.

March 1. 1851.

Papilio Arete Cramer, Pap. pl. 313. f. E. F.
Java, Amboyna, India, Penang.

B. M.

2. DEB. ARCADIA.

Papilio Arcadia Cramer, Pap. pl. 116. f. D. E.; Hübner, Verz. bek. Schm. n. 279. (Temenis Arcadia)

Satyrus Caumas Godart, Enc. M. ix. p. 479. n. 7.
Java, Sumatra.

5 B

3. **DEB. ISANA.**
Satyrus Isana Kollar in *Hugel's Reise nach Kaschmir*,
 p. 448. pl. 16. f. 3, 4.
 Mussooree, Himalayas.
4. **DEB. ROHRIA.**
Papilio Rohria Fabricius, Mant. Ins. II. p. 45., Ent. Syst.
III. pt. 1. p. 75. n. 235.; Godart, Enc. M. IX. p. 479.
 n. 8.
 India, Java.
5. **DEB. VERMA.**
Satyrus Verma Kollar in *Hugel's Reise nach Kaschmir*,
 p. 447. pl. 16. f. 1, 2.
 Simlah, Himalaya.
6. **DEB. HYRANIA.**
Satyrus Hyrania Kollar in *op. cit.* p. 449. pl. 17. f. 1, 2.
 Simlah, Himalaya.
7. **DEB. ? PANTHERA.**
Papilio Panthera Fabricius, Mant. Ins. II. p. 39., Ent.
Syst. III. pt. 1. p. 75. n. 234.
 Tranquebar.
8. **DEB. SAMIO.**
Debis Samio E. Doubleday MS.; Doubl. Westw. & Hewits.
Gen. Diurn. Lep. pl. 61. f. 3.
 East India. B. M.
9. **DEB. PORTLANDIA.**
Papilio Portlandia Fab. Ent. Syst. III. pt. 1. p. 103. n.
 319.; *Boisduval et Leconte, Icon. Lep. et Chen. Amer.*
Sept. pl. 58. (Satyrus P.).
Oreas marmorea Andromache Hübner, Samml. exot. Schm.
 Band i. pl. —.
 United States, N. America. B. M.

Genus VI. CYLLO.

CYLLO *Boisduval, E. Doubleday.*
 HIPIO *Hübner, Verz.*
 SATYRUS *Sect. A. p. Godt.*

BODY small, weak; wings large; fore wings emarginate along the apical margin; hind wings angulated or tailed in the middle of the outer margin.

HEAD moderate-sized, hairy, with a broad short tuft in front.

Eyes prominent, naked.

Labial Pulpi rather short, compressed, broad, obliquely porrected upwards, the tip not reaching to the level of the top of the eyes; thickly clothed with short scaly hairs, lying close together; the back of the middle joint with a tuft of thick hairs extending from the middle to the tip.

Antennæ of variable length, slender; terminated by a gradually formed elongate club, scarcely thicker than the rest of the antenna.

THORAX rather short, compressed, elevated in its hinder portion.

Fore Wings subtriangular. Fore margin strongly arched; apical angle rounded. Apical margin angulated, or rather dilated, a little below the apex, below which the margin is emarginate. Inner margin nearly straight. None of the veins dilated at the base. Costal vein extending a little beyond the middle of the costa. Postcostal vein with its branches arranged as in *Debis*. Upper disco-cellular vein very short, oblique, arising near the middle of the wing; middle disco-cellular vein equally short, more transverse: outer disco-cellular long, much curved, the curve being towards the base of the wing, the extremity directed outwards, and uniting with the third branch of the median vein at about the same distance from its base as exists between the origin of its first and second branches; the third branch angulated at the place of junction with the outer disco-cellular, beyond which it is nearly straight.

Hind Wings broadly subovate; outer angle rounded. Outer margin scalloped, strongly angulated, or tailed, in the middle, at the extremity of the third branch of the median vein. Precostal vein nearly straight. Costal vein extending nearly to the outer angle. Postcostal vein branching at a moderate distance from the base (which is rather nearer the body than the precostal vein). Upper disco-cellular vein short, curved: lower disco-cellular considerably longer, nearly straight, oblique; uniting with the third branch of the median vein at a short distance beyond its origin, closing the discoidal cell in an acute point.

Fore Legs very minute, clothed with short hairs, not forming a brush. The tibia nearly equal in length to the femur. Tarsus about two thirds of the length of the tibia. *Fore Legs* of the female rather longer, scaly. The femur clothed with short hairs beneath. Tibia and tarsus of nearly equal thickness throughout; the latter obliquely truncate at the tip, with a few minute spines visible at or near the tip beneath, indicating the articulations.

Four Hind Legs of moderate length, slender, scaly. Tibiæ with a very few very slender spines beneath. Tibial spurs small. Tarsus with the articulations very distinct, armed beneath and at the tips with rather long fine spines. Ungues curved, acute; armed beneath near the tip with a distinct acute tooth, nearly equal in size to the apical tooth of the claw.

ABDOMEN small, or but moderately robust.

CATERPILLAR long, somewhat pisciform, being narrowed behind the head, gradually thickening to the middle of the body, and then gradually acuminate to the tail, which is terminated by two long setose pointed horns; head somewhat heart-shaped, the upper edge armed with two erect obtuse setose horns.
CHRYSA LIS thick, simple; head-case terminating in an obtuse point.

The preceding characters are those of *C. Leda* and *Banksia*, which may be considered as the types of the genus, which differs at once from the preceding in the naked eyes, the short densely squamose palpi, the extremely short middle disco-cellular vein of the fore wings, the lower disco-cellular vein of the hind wings longer than the upper, united with the third branch of the median vein at some distance beyond its origin. The typical species are distinguished by the dull nearly uniform colours of the upper surface of the wings, the fore wings being simply marked with a large black subapical patch, generally on a fulvous ground, bearing two white dots; beneath, they are equally dull in their colours, but more freckled and clouded, with a darker striga across them beyond the middle, and the hind wings have a more or less ill-defined row of ocelli.

C. Lowii, represented in our Pl. LXI., and a fine Javanese new species, *C. Crishna W.*, differ from the types of the genus in their larger size, the much greater elongation of the tails of the hind wings, and, more especially, in having the claws of the tarsi simple, whilst they are distinctly bifid in *C. Leda*, &c. The under surface of the wings of *C. Lowii* nearly resembles the upper side, except that the fore wings have a clearly marked small ocellus near the tip, and the hind wings are pulverose towards the anal margin, and bear two larger ocelli, one near the outer and one near the anal angle.

All the species of the genus are natives of the East.

CYLLO.

1. CYL. LEDA.

Papilio Leda Linnaeus, *Syst. Nat.* ii. p. 773. n. 150.; *Fabricius, Syst. Ent.* p. 500., *Ent. Syst.* iii. pt. 1. p. 108. n. 333.; *Cramer, Pap.* pl. 196. f. C.D., 292. f. A.; *Drury, Ill. Ent.* i. t. 15. f. 5, 6.; *Hübner, Samml. exot. Schm.* Band i. pl. —. (*Oreas marm.* Led. male); *Godart, Enc. M.* ix. p. 478. n. 4. (*Satyrus L.*); *Horsfield, Cat. Lep. East Ind. Comp.* pl. 8. f. 9. (larva, pupa, and details).

Papilio Solandra Fabricius, *Syst. Ent.* p. 500., *Ent. Syst.* iii. pt. 1. p. 106. n. 328.; *Donovan, Ins. of New Holland*, pl. 23. f. 1.; *Boisduval, Voy. Astrolabe, Ent.* pt. 1. p. 142.; *Boisduval in Delegorgue, Voy. en Afr.* App. p. 594.

India, Java, Mauritius, New Holland.

B. M.

2. CYL. HELENA Westw.

Oreas marmorea Leda Hübner, *Samml. exot. Schm.* Bd. i. pl. —. (female).

Western tropical Africa.

B. M.

3. CYL. BANKSIA.

Papilio Banksia Fabricius, *Syst. Ent.* p. 499, *Ent. Syst.* iii. pt. 1. p. 106. n. 327.; *Donovan, Ins. of New Holland*, pl. 25. f. 1.; *Hübner, Verz. bek. Schm.* n. 538. (*Hipio Leda*); *Godart, Enc. M.* ix. p. 477. n. 3.

Papilio Ismene Cramer, *Pap.* pl. 26. f. A. B.

Papilio Mycena Cramer, *Pap.* pl. 291. f. F.

Papilio Phedima Cramer, *Pap.* pl. 292. f. B.

Papilio Arcensia, Cramer, *Pap.* pl. 292. f. C.

Java, Northern India, New Holland.

B. M.

4. CYL. GERDRUTUS.

Papilio Gerdrutus Fabr. *Ent. Syst.* iii. pt. 1. p. 92. n.

224.; *Jones, Icones*, iv. t. 5. f. 2.; *Godart, Enc. M.* ix. p. 478. n. 5.

—?

5. CYL. CONSTANTIA.

Papilio Constantia Cramer, *Pap.* pl. 133. f. A. B.; *Godart, Enc. M.* ix. p. 477. n. 1. (*Satyrus* Const.); *Boisduval, Voy. de l'Astrolabe, Entomol.* pt. 1. p. 141.; *Hübner, Verz. bek. Schm.* n. 537. (*Hipio* Const.).

Northern India, Amboyna.

B. M.

6. CYL. AMABILIS.

Cylo amabilis Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1. p. 140. pl. 2. f. 1, 2.

New Ireland.

7. CYL. BETSIMENA.

Cylo Betsimena Boisduval, *Faune Ent. de Madag.* p. 58. Tamatave.

8. CYL. LOWII.

Cylo Lowii E. Doubl. *List Lep. Brit. Mus.* Append. p. 31.; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 61. f. 4.

Sarawak.

B. M.

9. CYL. CRISHNA Westw. nov. sp.*

Java, Northern India.

B. M.

Fossil Species.

10. CYL. SEPULTA.

Cylo sepulta Boisduval in *Annales Soc. Ent. de France*, 1830, p. 371. pl. 8.

Aix, South of France.

* *C. alis anticis subapicem vix angulatis, posticis in medio caudatis; omnibus supra fuscis anticis fascia lata obliqua luteo-albida e medio costae ad angulum internum extensa, punctum nigrum ad apicem areae discoidalis includente, ocello magno nigro subapicali, pupilla minima alba, guttisque duabus albis in circulo lutescenti externo, posticis angulo externo albido, ocellisque duobus versus angulum analem strigae undata submarginali communi lutescenti; subtus similis, ocello subapicali anticarum minuto, posticis ocello versus angulum externum duobusque minutis versus angulum analem.* (Mas.) *Expans. alar. unc.* 3 $\frac{3}{4}$.

Genus VII. ZOPHOESSA.

ZOPHOESSA E. Doubleday.

BODY moderate-sized; eyes hairy; fore wings elongate-triangular; hind wings tailed.

HEAD small, wider in the male than in the female, hairy, not tufted.

Eyes prominent, hirsute.

Antennæ not half the length of the fore wings, very slender; terminated by a distinct, elongate, slender club.

Labial Palpi long, slender, compressed, elevated obliquely considerably higher than the level of the top of the eyes; the long second joint not clothed behind with a tuft of hairs, front with numerous long hairs; terminal joint minute.

THORAX short, very convex, finely hairy.

Fore Wings large, elongate-triangular. Fore margin but slightly curved; apical angle obtuse. Apical margin long, slightly concave, not scalloped; inner angle rounded. Inner margin nearly straight. Costal vein rather dilated at the base, extending to the costa a little beyond the middle. Postcostal vein with the first and second branches arising near the middle of the wing; the second close to the anterior extremity of the discoidal cell; third and fourth branches arising at equal distances apart beyond the cell. Upper disco-cellular extremely short, oblique: middle disco-cellular rather longer, less oblique, straight: outer disco-cellular very much longer, nearly straight, almost transverse, uniting with the third branch of the median vein at about the same distance from its base as exists between the first and second branches; the third branch being angulated at the place of junction, beyond which it is slightly curved.

Hind Wings subovate. Costal margin slightly arched. Outer margin scalloped; the middle, at the extremity of the third branch of the median vein, being elongated into a tail, the space within the extremity of the first branch being deeply emarginate. Precostal vein very short, furcate at the tip. Costal vein extending to about two thirds of the length of the costa. Postcostal vein branching at a considerable distance from the base. Upper disco-cellular short, curved, but rather longer than the space between the branches of the postcostal vein; lower disco-cellular vein longer than the upper, curved, uniting with the median vein close to the origin of the third branch, which is slightly curved, and extends to the outside of the tail.

Fore Legs of the male very minute. The femur and tibia of equal length, slightly hairy. The tarsus longer than the tibia, very hairy and brush-like. *Fore Legs* of the female not longer than those of the male, cylindrical. The tibia externally clothed with a few hairs. The tarsus scarcely more than half the length of the tibia, scaly, rather dilated, and obliquely truncate at the tip, with a few very short rather thick spines nearly concealed by the scales.

Four Hind Legs rather short, slender. Tibia with a few very fine spines on the under side; tibial spurs rather long. Tarsus armed on the sides beneath with rows of fine spines. Ungues elongated, curved, very acute, entire.

ABDOMEN small and slender in the males, elongate-ovate in the females.

This genus was proposed by Mr. E. Doubleday in the illustrations of the present work (Pl. LXI. f. 1.), but no characters have yet been published of it. It is unquestionably very close to *Debis*, differing chiefly in the larger size, more triangular fore wings, concave on the apical margin, and more strongly caudate hind wings. Like many of the species of *Debis*, the typical species is also a native of the East Indies. The under surface differs chiefly in the variegated markings of the basal half of the hind wings, in which purplish white, pale yellow, buff, and orange brown are elegantly disposed. The fore wings have three minute eyelets near the apical margin; whilst the hind wings are marked with six beautiful large black ocelli irrorated with pale blue, and with white pupils, surrounded by pale brown and grey rings.

ZOPHOESSA.

1. *ZOPHOESSA SURA* E. Doubleday MS.; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 61. f. 1.
Sylhet. B. M.

Genus VIII. GNOPHODES.

GNOPHODES *E. Doubleday.*

BODY slender; head large; eyes naked; fore wings strongly angulated below the apex, dilated on the inner margin, and bearing a large oval tuft of silky hairs.

HEAD large, finely hairy.

Eyes large, very prominent, naked.

Antennæ very slender; terminating in a long, very slender, gradually formed club, subobtusate at the tip.

Labial Palpi short, thick, compressed, nearly erect, the tip nearly level with the top of the eyes, very thickly squamose in front of the middle joint; back of this joint with a tuft of hairs applied to the face; terminal joint very small and slender.

THORAX short, robust, convex.

Fore Wings rather large and broad. Fore margin strongly arched; apex truncated. Apical margin strongly angulated below the tip at the extremity of the lower discoidal vein, below which it is very deeply emarginate and scalloped. Inner margin very much dilated in the males. The space between the median and submedian veins, near the middle of the length of the wing, occupied by a large oval tuft of silky hairs on the upper side of the wing. Veins arranged as in *Cyllo*.

Hind Wings large, subtriangularly ovate. The costal margin nearly straight. Outer margin scalloped; its middle produced into a short tail at the extremity of the third branch of the median vein; the space within the extremity of the first branch cut into a deep scallop. Veins arranged as in *Cyllo*.

Fore Legs of the male very minute, scarcely hairy. The tarsal portion very short, exarticulate, not brush-like.

Four Hind Legs very slender, moderately elongate, almost destitute of fine spines on the under side.

ABDOMEN slender.

This is another genus proposed by E. Doubleday in Plate LXI. of this work, of which no characters have been given, and which appears to me to approximate as closely to *Cyllo* as *Zophoessa* does to *Debis*; the dilated hind margin of the fore wings, and the oval patch of fine silky hairs in the middle of the wing towards the hinder margin, being its chief distinctions. The under surface of the wings of the typical species of the genus (of which I have only seen males) is thickly irrorated with black, brown, and buff; some more distinct dark brown clouds appearing in the middle of the fore wings, and some blackish spots in the hind wings, which have a rather broad pale subcostal streak, and several small whitish spots in the ordinary place of the ocelli.

There is another species (*Gn.?* *Morpene W.*) from Ashanti and Congo, in the British Museum, rather larger than *Gn. Parmeno*, the male of which has the fore wings also dilated along the hinder margin, but it does not bear any patch of silken hairs; the hind wings, on the contrary, have a large patch of silky white scales on the upper side, covered by the dilated hind margin of the wings.

GNOPHODES.

1. *GNO. PARMENO* Doubleday MS.; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 61. f. 2.
Sierra Leone.

B. M.

2. *GNO.?* *MORPENA* Westw.
Congo, Ashanti.

B. M.

Genus IX. HÆTERA.

HÆTERA Fabricius, *Syst. Gloss.*

SATYRUS Sect. C. D. *Godt. Enc. M.* ix.

CITHÆRIAS, *PIERIS*, and *ANTIRRHÆA* Hübn.

HÆTERA and *ANTIRRHÆA* Boisduval MS., *E. Doubleday.*

BODY slender; wings elongate, often diaphanous; hind pair often angulated, or tailed.

HEAD moderately broad, very finely hairy.

Eyes large, prominent, naked.

Labial Palpi large, very compressed, ascending obliquely higher than the level of the top of the eyes, and

April 1, 1851.

5 C

prorected in front to about the length of the head, thickly clothed with scaly hairs, the front forming a pointed ridge; the hind edge not furnished in the middle with a tuft of hairs resting on the face; terminal joint small, slender.

Antennæ not more than two fifths of the length of the fore wings, slender, with the joints distinct; terminated by a gradually formed, very much elongated, and slender club, with the joints much shortened, and scarcely distinct.

THORAX short, oval, finely hirsute.

Fore Wings large, elongate, subtriangularly ovate, often diaphanous. Costal margin moderately arched; tip rounded. Apical margin two thirds of the length of the costal, convex, entire. Inner margin half the length of the costal, generally straight. Costal vein with an elongated swelling at the base, extending to about two thirds of the length of the costa, rather beyond the anterior extremity of the discoidal cell. Post-costal vein with its branches free; the first and second arising considerably beyond the middle of the wing, before the extremity of the discoidal cell; third branch arising half way between the latter and the tip of the wing; fourth branch arising half way between the base of the third and the tip of the wing, and extending to the tip; the terminal part of the vein extending to the apical margin below the tip. Upper disco-cellular vein obliterated: middle disco-cellular arising at the distance of three fifths of the length of the wing, nearly straight, transverse: lower disco-cellular of about equal length to the middle one, also transverse, but slightly angulated at the base; uniting with the third branch of the median vein at a considerable distance from the origin of the latter, which is strongly angulated at the place of junction, the discoidal cell being thus closed at some distance beyond the middle of the wing. Third branch of the median vein beyond the place of junction, as well as the first and second branches, straight; the base of the median vein having a small swelling on its posterior edge, which is thus brought into contact with the dilated and curved base of the submedian vein. The anal or internal vein very short, and forming a small oval cell at the inner base of the wing by its junction with the submedian.

Hind Wings elongate-obovate, often more or less transparent, and with the extremity of the third branch of the median vein often prolonged into an angulated or tailed projection. Precostal vein very short, forming a small erect spur. Costal vein slender, curved, and running close to the costa. Postcostal vein very much arched, so that its basal half in the typical species runs almost in contact with the costal vein, whence it forms a curved line (in conjunction with the upper and lower disco-cellular veins) to the middle of the wing; the lower uniting with the median vein exactly at the base of the third vein of the latter: the first branch of the postcostal vein arising far from the base, and much arched, extending to the outer angle of the wing. The two disco-cellular veins are of nearly equal length, and straight; closing the discoidal cell at about half the length of the wing. Third branch of the median vein much curved at its basal part.

Fore Legs of the male extremely slender, small, and delicate, not forming a thick brush. The tarsus of equal thickness with, but not half the length of, the tibia, which is as long as the femur. *Fore Legs* of the female considerably more elongate, but slender; tibia not more than two thirds of the length of the femur. Tarsus nearly equal in length to the tibia, gradually thickening to the tip, which is obliquely truncate, with several acute spines indicating the outer joints.

Four Hind Legs long, slender, finely scaly. The tibia beneath with but few spines; tibial spurs very short. Tarsi with the basal joint as long as the four following united, with several rows of fine slender spines beneath and at the sides. Ungues small, very much curved and acute, not bifid. Paronychiae minute.

ABDOMEN slender and elongated.

This is a very conspicuous genus of butterflies, arising from the diaphanous condition of the wings in the typical species, and in the peculiar markings of others. The characters, also, of the genus exhibit several interesting particulars: the slightly hairy palpi, and the extremely delicate fore legs of the male, the very much curved base of the postcostal vein of the hind wings, causing the discoidal cell to extend nearly to the costa, the obliterated condition of the upper disco-cellular vein of the fore wings in the type, *H. Piera*, and the origin of the anterior discoidal vein from the postcostal one at some little distance beyond the extremity of the discoidal cell, are worthy of notice. In *H. Esmeralda* and *Andromeda*, the lower disco-cellular vein of the hind wings is united to the third branch of the median vein at about the same distance from the base of the latter as its own length; thereby causing the discoidal cell of these wings to be more regularly ovate at its extremity, with the branches which extend from it radiating more regularly. In *H. Nereis*, the upper discoidal vein of the fore wings arises at the junction of the middle disco-cellular with the postcostal (the upper disco-cellular being here also obliterated), whilst the lower disco-cellular vein of the hind wings joins the median vein half way between the origin of the first and second branches; and in *H. Dydimene* and *Lena* it joins it even nearer to the origin of the first branch, whereby the discoidal cell in these wings is greatly abbreviated. In the latter species, the lower disco-cellular vein of the fore wings is more oblique, as well as more angulated at the base. This species, in its brown fore wings traversed by a paler straight fascia, and its brown hind wings marked with numerous blue and white spots, as well as produced into a tail in the middle of the hind margin, appears to me to render necessary the introduction into the genus of *P. Philoctetes* and several other species. *P. Philoctetes*, indeed, has much of the general appearance of *H. Lena* and *Dracontis*. Its fore wings, however, are somewhat convex along the apical margin; whilst the inner margin is greatly dilated in the males. Probably owing to the greater width of the wing, the upper disco-cellular vein reappears, but is very short; the middle and lower ones are also much more oblique, uniting into a somewhat ∞ shape, the middle one being concave and the lower one convex. The most curious part of the wing, however, consists of the large patch of curved hairs on the under side, between the median and submedian veins, which latter is singularly sinuated in the middle to make way for this patch. The hind wings in this species differ from all the preceding in having the basal portion of the postcostal vein straight, so that the discoidal cell is only of the ordinary width. *H. Archæa* has nearly similar general characters, but its hind wings are not tailed, the fore wings of the male have a still larger tuft of hairs beneath, and the submedian vein forms a large sweeping curve, its tip directed to the middle of the

wing, instead of extending as ordinary to the inner angle; the postcostal vein and its branch are also very irregular in the male of this species. These peculiarities will render the establishment of several sections in the genus necessary, the last of which may probably hereafter be generically separated from the rest.

The species of this genus are natives of Brazil and the hotter parts of South America. Of their habits, we are informed by M. Lacordaire, that they "vivent dans les broussailles, le long des chemins, et se posent à terre ou sur les feuilles, d'où elles ne s'envolent que pour aller se poser de nouveau à quelques pas de distance." II. Philoctetes is very rare; but on one occasion, at Macouria, he found a considerable number in a few hours. Dindymene frequents thick woods, flies low, and alights on dead leaves. All the other species are common. Of their transformations, we are only acquainted with Madame Merian's figure of the typical species, mistaken by Linnaeus for the larva of his Pap. Anacardi (Vanessa Aglatonice Godart). It is found at Surinam, on the Acajou (Anacardium), and is described as being clothed with long tufts of white hairs at the sides of the body.

HÆTERA.

Division A. Fore Wings of the Males not dilated on the inner margin; Hind Wings with the base of the postcostal vein much curved.

Section I. Wings hyaline. (Hætera proper, Cithærias Hübner.)

Subsection a. Lower disco-cellular vein of the Hind Wings united with the median vein at the base of its third branch.

1. HÆT. PIERA.

Papilio Piera Linnaeus, *Syst. Nat.* ii. p. 754. n. 52., *Mus. Lud. Utr.* p. 220.; *Fabricius, Syst. Ent.* p. 467., *Ent. Syst.* iii. pt. 1. p. 183. n. 566.; *Clerck, Icones*, t. 36. f. 7, 8.; *Merian, Ins. Surin.* t. 16. f. sup. sinistr.; *Cramer, Pap.* pl. 291. f. C. D. E.; *Godart, Enc. M.* ix. p. 483. n. 17.; *Hübner, Samml. exot. Schm. Bd. i.* pl. —.; *Boisduval, Sp. Gen. Lep.* pl. 9. B. f. 4. (Hætera P.); *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 62. f. 3.

Cithærias Piera Hübner, *Verz. bek. Schm.* n. 494.

South America.

B. M.

Subsection b. Lower disco-cellular vein of the Hind Wings connected with the third branch of the median vein some distance beyond its origin.

2. HÆT. ANDROMEDA.

Papilio Andromeda Fabricius, *Syst. Ent.* p. 467., *Ent. Syst.* iii. pt. 1. p. 184. 569.; *Godart, Enc. M.* ix. p. 483. (Satyrus A.); *Hübner, Verz. bek. Schm.* n. 496. (Cithærias A.).

Papilio Pireta Cramer, *Pap.* pl. 315. f. A.

Papilio Philis Cramer, *Pap.* pl. 387. f. E.

Cithærias Cissa Hübner, *Verz. bek. Schm.* n. 495.

Papilio Menander Drury, *Ill. exot. Ent.* iii. pl. 38. f. 3.

South America.

B. M.

3. HÆT. ESMERALDA.

Hætera Esmeralda E. Doubl. *Ann. Nat. Hist.* xvi. p. 306. (1845); *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 62. f. 4.

Para.

B. M.

Section II. Wings not hyaline. (Pierella Westw., Pieris Hübner, Antirrhæa Boisduval MS.)

4. HÆT. NEREIS.

Papilio Nereis Fabricius, *Ent. Syst.* iii. pt. 1. p. 184. n. 568.; *Drury, Ill. Ent.* iii. pl. 35. f. 4.; *Stoll, Suppl. Cramer*, pl. 26. f. 3.; *Jones, Icones*, ii. t. 35. f. 2.; *Godart, Enc. M.* ix. p. 483. n. 16.; *Lucas, Hist. Nat. Lep. exot.* pl. 80. f. 1.; *Hübner, Verz. bek. Schm.* n. 497. (Cithærias Ner.).

Brazil, Guiana, Demerara.

B. M.

5. HÆT. DINDYMENE.

Papilio Dindymene Fabricius, *Spec. Ins.* ii. p. 86., *Ent.*

Syst. iii. pt. 1. p. 108. n. 335.; *Cramer, Pap.* pl. 198. f. F. G.; *Godart, Enc. M.* ix. p. 482. n. 14. (Satyrus Dind.).

Papilio Lamia Sulzer, *Ins.* (ed. Rœm.) t. 18. f. 1.

Papilio Rhea Fabricius, *Mant. Ins.* ii. p. 18., *Ent. Syst.* iii. pt. 1. p. 108. n. 334. β.; *Hübner, Verz. bek. Schm.* n. 498. (Pieris Rhæa).

Guiana, Brazil.

B. M.

6. HÆT. LUNA.

Papilio Luna Fabricius, *Ent. Syst.* iii. pt. 1. p. 109. n. 336.; *Jones, Icones*, iv. t. 9. f. 1.; *Godart, Enc. M.* ix. p. 482. n. 15.

An var. H. Dyndimene?

Surinam, Demerara.

B. M.

7. HÆT. LARYMNA.

Hætera Larymna E. Doubl. *MS.*; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 62. f. 1.

Brazil.

B. M.

8. HÆT. LENA.

Papilio Lena Rösel, *Ins. Bel. add.* t. 10. f. 3, 4.; *Linn. Syst. Nat.* ii. p. 784. n. 206.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 108. n. 334.; *Cramer, Pap.* pl. 198. D. E.; *Godart, Enc. M.* ix. p. 481. n. 13.; *Lucas, Hist. Nat. Lep. exot.* pl. 79. f. 3.; *Hübner, Verz. bek. Schm.* n. 499. (Pieris L.).

Demerara, Brazil, Guiana.

B. M.

9. HÆT. DRACONTIS.

Pieris Dracontis Hübner, *Verz. bek. Schm.* n. 500.

Papilio Lena Cramer, *Pap.* pl. 291. f. A. B.

Hætera Lena Doubl. *Westw. & Hewits. Gen. Diurn. Lep.* pl. 62. f. 2.*

Brazil.

B. M.

Division B. Fore Wings of the Males dilated on the inner margin, with a tuft of hairs beneath; Hind Wings with the base of the postcostal vein straight. (Antirrhæa proper Hübner.)

Section I. Hind Wings tailed.

10. HÆT. PHILOCTETES.

Papilio Philoctetes Linnaeus, *Syst. Nat.* ii. p. 750. n. 29., *Mus. Lud. Utr.* p. 219.; *Clerck, Icones*, t. 30. f. 3.; *Fabricius, Syst. Ent.* p. 456., *Ent. Syst.* iii. p. 83. n. 259.; *Esper, Pap. exot.* t. 46. f. 4.; *Cramer, Pap.* pl. 20. f. A. B. C.; *Drury, Ill. exot. Ent.* ii. pl. 1. f. 1—3. (male); *Sulzer, Ins.* (ed. Rœm.) t. 13. f. 5.; *Godart, Enc. M.* ix. p. 480. n. 11. (Satyrus Ph.);

* The insect represented in our Pl. LXII. f. 2. is the male, and Cramer's pl. 291. f. A. B. the female, of a species distinct from the real Lena of Rösel and Linnaeus, the female of which is represented by Cramer, pl. 198. f. D. E. Cramer (*Pap. exot.* iv. p. 5.) considered the former insect as the male of the latter: "La forme des ailes inférieures diffère de celle des femelles comme étant presque à queue." The male of Lena, however, has not the hind wings tailed, resembling the female in this respect; it differs, however, from the latter in having narrower fore wings, and the hind wings marked opposite the extremity of the abdomen with a nearly rounded buff-coloured patch of silky scales, with a few very delicate long dusky hairs. The spots on the hind wings are more distinct, and not confluent as in the tailed species, which Hübner properly separated in his *Verzeichniss*; it is also distinguished by a transverse row of small whitish spots across the middle of the discoidal cell of the fore wings. The female of H. Dracontis has the hind wings much suffused with pale blue, on which the white spots are placed. This sex is tailed as well as the male, which latter differs in its narrower fore wings, and in the hind wings being marked nearly opposite the extremity of the body with a small elongate-oval buff spot much suffused with brown. The fore wings in this species have a transverse row of blackish spots across the middle of the discoidal cell of the fore wings.

The small pale spot opposite the extremity of the body, indicating the male sex, is also found in H. Dindymene. It is an important character, as proving the relationship of these insects with Morpho and its allies.

E. Doubl. List Lep. Brit. Mus. p. 121. (*Antirrhæa* Ph.).
Surinam, Demerara.

B. M.

11. HÆT. MORNA.

Papilio Morna Fabricius, Syst. Ent. 500. n. 245., *Ent. Syst.* III. pt. 1. p. 107. n. 331.; *Godart, Enc. M.* IX. p. 481. n. 12.
An *Philoctetes* var. *mutila*?
West Indies.

Section II. *Hind Wings not tailed.*

12. HÆT. ARCHÆA.

Antirrhæa Archæa Hübner, Samml. exot. Schm. Band ii. pl. —.; *E. Doubl. List Lep. Brit. Mus.* p. 121.
Satyrus Girondius Godart, Enc. M. IX. p. 484 n. 19.
Brazil.

B. M.

13. HÆT. BETRO.

Satyrus Betro Godart, Enc. M. IX. 484. n. 20.
Brazil.

14. HÆT. ?? MILTIADES. See antè, p. 310. n. 43.

Genus X. CAEROIS.

CAEROIS *Hübner, Verzeichniss.*
ARPIDEA *Duncan, Nat. Library.*
HAMES *Boisduval MS.*
SATYRUS Sect. B. *Godt. Enc. M.*

BODY small, slender; fore wings strongly hooked; hind wings tailed.

Antennæ short, very slender, with a very slender but distinct club.

THORAX small, oval.

Fore Wings large, triangular, strongly falcate at the tip. Fore margin very much arched; apex acutely angulated. Apical margin deeply emarginate; hinder angle rounded, especially in the male. Inner margin nearly straight, except towards the extremity, which is rounded. Costal vein extending to the costa, a little distance beyond the extremity of the discoidal cell. Postcostal vein with its first two branches arising beyond the extremity of the discoidal cell, short; third branch arising at some distance beyond, short; fourth branch extremely short and oblique; terminal portion of the vein united to the costa at some distance preceding the tip of the wing. Upper disco-cellular vein very short but distinct and transverse, arising from the postcostal at about three fifths of the length of the wing: middle and lower disco-cellular forming a rather curved line, the two being nearly equal in length, closing the discoidal cell by a transverse slightly concave line; uniting with the third branch of the median vein at some distance from its origin, at a point where it is strongly angulated, this third branch being straight beyond the place of junction. Postmedian vein curved upwards at its extremity in the male, following the outline of the wing in that part.

Hind Wings large, broadly ovate, angulated at the anal angle, and with the middle of the outer margin produced into a tail at the extremity of the third branch of the median vein; the tail being directed outwards more obliquely than represented in our Plate LXV. fig. 1. The costal margin is nearly straight, except at the base; the outer angle rounded. The anal margin deeply grooved. The precostal vein strong, directed forwards, with the tip bent towards the body. The costal vein running very close to the costa, nearly to its tip. The postcostal vein arising rather beyond the precostal, branching at a considerable distance from its base. The upper disco-cellular slightly curved, forming the base of the discoidal vein; the outer disco-cellular vein more oblique, nearly straight, and uniting with the third branch of the median vein at a smaller distance from its base than exists between the origin of the first and second branches of the median vein. The submedian vein extends to the extremity of the anal angle.

Four Hind Legs rather short, slender, and scarcely spined on the under side of the tibia. The tarsi more regularly spined.

ABDOMEN small, slender.

CATERPILLAR long, subcylindrical, slightly thickest in the middle of the body, naked, free from warts or tubercles; the head oval; the abdomen terminated by two setose filaments nearly half as long as the whole body, gradually attenuated to the tip.

CHRYsalis oval; the head apparently slightly bifid; the case of the metathorax gibbose, and the extremity of the body incurved.

I regret not being able to give more precise and detailed generic characters of the curious insect which is the type of this genus. Our figure represents the male, and will give a general idea of its form, except that the tails are directed outwards more in a line with the hind margin of the wing, extending from the anal angle to the tails. At first sight this genus might be considered as very closely allied to *Protogonius* and *Hypna* (Pl. XLIX.); but the elongated discoidal cell of the fore wings, extending, as will be seen in our figure, to the middle of the broad fulvous bar, as well as the general arrangement of the veins of the wings (independent of the peculiar markings of the under side), at once removes this insect from the vicinity of those genera. The wings, on the under side, are a pale brownish

red, marked with a great number of small dark transverse freckles, with two dark transverse strigæ across the middle, followed by an oblique one extending from the costa to the inner angle of the fore wings, and from the outer to the anal angle of the hind wings. The type is a native of the hottest parts of South America, and is very rare, the only specimens which I am acquainted with in this country being the mutilated ones in the Linnæan and Banksian collections.

The extraordinary Caterpillar is represented by Stoll, who informs us that it feeds on the leaves of the sugar cane in Surinam. It has a reddish brown head with darker markings; the body is purplish brown, with yellow diamond-shaped spots down the back, edged with darker and lighter flesh-coloured lines. The Chrysalis is pale brown with darker markings.

CAEROIS.

1. CAER. CHORINÆUS.

Papilio Chorinæus Fabricius, Syst. Ent. p. 484., Ent. Syst. iii. pt. 1. f. 72. n. 225.

Arpidea Chorinæus Duncan in Jardine's Nat. Library, Entomol. For. Butt. p. 180. pl. 23.

Papilio Arcesilaus Cramer, Pap. pl. 294. f. A. B. C.; Stoll, Suppl. Cram. pl. 6. f. 1. 1 A. (caterpillar and chrysalis); Esper, Pap. exot. t. 54. f. 5—7.; Hübner, Verz. bek. Schm. n. 536. (Caerois Arc.).

Surinam.

Genus XI. CÆLITES.

CÆLITES *Boisduval MS.*

BODY slender, finely hairy; wings large, splendidly glossed with purple on the upper side; fore wings subconcave; hind wings regularly oval, ocellated beneath; all the wings very slightly scalloped.

HEAD moderate-sized, finely hairy.

Eyes naked.

Labial Palpi rather small, very compressed, clothed with short scaly hairs, elevated obliquely, but not reaching the level of the top of the eyes, and porrected to a little distance in front of the face; middle joint without a dorsal tuft; terminal joint minute, oval.

Antennæ scarcely more than one third of the length of the fore wings, slightly curved, very slender; gradually, but very slightly, thickened to the tip; forming a very long club, but little thicker than the rest of the antennæ, composed of short, scarcely distinct joints, of nearly equal length throughout.

THORAX oval, finely hairy.

Fore Wings large, triangular-ovate. Fore margin moderately curved; apical angle rounded. Apical margin more than two thirds the length of the costal, slightly emarginate, and very slightly scalloped; hinder angle rounded. Hinder margin about equal to the apical, nearly straight. Costal vein strongly swollen for some distance at the base, extending to the costa opposite the extremity of the discoidal cell. Postcostal vein with its first and second branches arising at some distance before the anterior extremity of the cell; third branch arising at about one fourth of the distance between the cell and the tip of the wing; fourth branch arising about half way between the cell and the tip, uniting with the costa before the tip; the terminal part of the vein extending to the tip. Upper disco-cellular vein arising rather beyond the middle of the wing, very short, transverse: middle disco-cellular much longer, slightly curved, and directed obliquely towards the base of the wing: lower disco-cellular longer than the middle one, rather angulated at the base, the lower part slightly oblique, and directed to the apical margin; uniting with the third branch of the median vein at a considerable distance from its origin; this third branch being slightly angulated at the place of junction, beyond which it is regularly curved. First branch of the median vein arising nearer the base of the wing than usual.

Hind Wings regularly oval. Costal margin curved. Outer margin slightly scalloped. Postcostal vein branching at a considerable distance from the base. Upper disco-cellular short, curved, forming the base of the discoidal vein: lower disco-cellular vein much longer, straight, oblique, terminating the narrow discoidal cell at the middle of the wing in an acute angle, by its union with the median vein exactly at the origin of its third branch, which is slightly curved.

Fore Legs of the male very minute and feathered. Coxa elongated. Femur shorter than the coxa, rather thickened at the tip. Tibia much shorter than the femur, very hairy. Tarsus extremely short, almost continuous with the tibia, apparently two-jointed; the terminal joint being scarcely visible under a lens.

The splendid purple gloss on the upper side of the large wings of the type of this genus, the regularly oval form, and the ocellated under surface of the hind wings, the somewhat concave apical margin of the fore wings, and the very slightly scalloped margins of all the wings, are the most evident distinctions of this genus. I have, however, only examined a single male, not in the best condition, but which is, I believe, unique, in Dr. Boisduval's collection. It is a native of the East Indies. On the under side the basal half of the

wings is dark brown, the apical half paler, with a pinkish gloss, with several slender brown streaks, parallel with the apical margin. The hind wings are much darker brown than the upper, and are marked with five ocelli, varying in size, the second and the outer one being the largest; they are black, with a minute white pupil, and a fulvous iris surrounded by a narrow brown circle.

CÆLITES.

1. CÆLIT. NOTHIS.

Cœlites Nothis *Boisduval MS.*; *Doubl. Westw. & Hewits.*
Gen. Diurn. Lep. pl. LXVI. f. 2.
 East India. Mus. Boisdv.

2. CÆLIT. EPIMINTHIA NOV. SP.*

Cœlites Epiminthia *Boisduval MS.*
 Borneo. Mus. Boisdv.

* Præcedenti coloribus similis, alis anticis magis falcatis, posticis in medio marginis externi angulatis.

Genus XII. ORINOMA.

ORINOMA *E. Doubleday.*

BODY moderately robust, clothed, especially at the sides of the thorax, in front and behind, with fine hairs; wings with longitudinal interrupted pale bars between the veins, and not ocellated.

HEAD hairy, especially in front, where they form a small tuft.

Eyes large, hairy.

Antennæ about two fifths of the length of the fore wings, very slender, curved downwards at the tip, and terminated by a long, gradually formed, but very slender club; the articulations scarcely distinct, finely carinated beneath on the inside.

Labial Palpi compressed, large, porrected obliquely, reaching nearly to the level of the top of the eyes, and extending forwards nearly to the length of the head, very hairy in front; terminal joint minute, slender.

THORAX oval. Tippets clothed with fulvous hairs. Metathorax clothed with longer grey hairs.

Fore Wings elongate, subovate. Fore margin arched; apical angle rounded. Apical margin entire, about three fifths of the length of the costal margin, very slightly emarginate in the middle; anal angle rounded. Inner margin straight in both sexes, of the same length as the apical. Costal vein swollen at the base; united to the costa a little beyond the middle of its length. Postcostal with its first and second branches free, arising before the extremity of the cell; the third at nearly half way between the cell and the apex; the fourth half way between the third and the apex, uniting with the costa before reaching the apex, as does also the terminal part of the postcostal vein; the upper discoidal vein being extended to the extremity of the rounded apex. Upper disco-cellular very short, oblique, arising a little before the middle of the length of the wing; middle disco-cellular scarcely longer than the upper, nearly transverse; lower disco-cellular much elongated and curved; the extremity directed outwards, and united with the third branch of the median vein at about the same distance from its origin as exists between the origin of its first and second branches; thus closing the discoidal cell rather before the middle of the wing; the third branch being angulated at the place of junction, beyond which it is rather curved. Postmedian vein nearly straight.

Hind Wings elongate-ovate. Costal margin curved; outer and anal angles rounded. Outer margin slightly scalloped; the scallop at the extremity of the third branch of the median vein being rather more decided than the rest. Prediscoidal vein erect, curved outwards at the tip. Postcostal vein arising nearer the body than the prediscoidal, branching at a considerable distance from its base. Upper disco-cellular arising at a little distance from the base of the branch, curved, oblique; lower disco-cellular about equal in length to the upper, straight, rather more transverse; uniting with the median vein exactly at the origin of its second and third branches, the latter of which is curved; the discoidal cell thus being closed in a rather acute point, at some little distance before the middle of the wing.

Fore Legs of the male very slender, small, and pectoral, densely clothed with delicate hairs. The tibia a little shorter than the femur, and the tarsus than the tibia. The tarsus exarticulate and destitute of claws.

Four Hind Legs moderately long, scaly. Femur hairy within. Tibia scarcely spined beneath; spurs distinct. Tarsus as long as the tibia, scaly, finely spined beneath and at the sides. Claws entire, very curved and acute. Paronychia minute, bifid.

ABDOMEN elongated, slender.

The type of this genus is a remarkable butterfly from Nepaul and Sylhet, which has very little of the general appearance of one of the Satyridæ, arising from the elongated form of its wings, and their peculiar style of colouring; the under side resembling the upper, so that there is no trace of the ocellated markings which are so common throughout the family; the streaks of pale brimstone colour running between the veins being repeatedly interrupted by the brown ground colour of the wing. The insect, consequently, has much more the aspect of some of the Danaidæ or Pieridæ; the hairy eyes, however, and the arrangement of the veins of the wings, agreeing almost identically with the next described genus, at once indicate its affinity with the present family.

ORINOMA.

1. ORIN. DAMARIS.

Pieris Damaris G. R. Gray MS.

Satyrus? *Damaris* E. Doubl. List Lep. Brit. Mus. p. 122.

Orinoma Damaris E. Doubleday in Gray's Desc. and Fig.

Lep. Nepaul, p. 14. t. 7. f. 2. 2 a.; *Doubl. Westw. &*

Hewits. Gen. Diurn. Lep. pl. 63. f. 3.

Nepaul, Sylhet.

B. M.

Genus XIII. NEORINA.

NEORINA Westwood MS.

BODY robust; wings large, subtriangular; fore wings with a broad oblique pale fascia, each with a large ocellus near the outer angle beneath.

HEAD large, hairy, not tufted in front.

Antennæ not more than two fifths of the length of the fore wings, very slender, much curved downwards at the tip; joints scarcely distinct; terminated by an elongated, very slender, and gradually formed club.

Labial Palpi broad, much compressed, very hairy in front, and with a small tuft of hairs in the middle of the back of the middle joint; terminal joint very small, slender, and oval, obliquely porrected, but scarcely reaching to the level of the top of the eyes.

THORAX robust, oval, hairy.

Fore Wings large, subtriangular. Fore margin much arched; apical angle slightly rounded. Apical margin five ninths of the length of the anterior, nearly straight, and very slightly scalloped; inner angle rounded. Inner margin nearly straight in both sexes, considerably longer than the apical. Costal vein but slightly swollen at the base, and extending only to the middle of the costa. Postcostal vein with its branches free; the first and second arising close together before the anterior extremity of the discoidal cell, and uniting with the costa far beyond the extremity of the costal vein; third branch arising half way between the cell and the tip; fourth branch arising at a little distance beyond the third, extending to the tip of the wing; the terminal part of the vein extending below the tip. Upper disco-cellular vein very short and oblique, arising at about two fifths of the length of the wing (at the tip of the little dark brown tooth on the inside of the fulvous bar, which in fact forms the boundary of the discoidal cell): middle disco-cellular rather longer, transverse: outer disco-cellular much longer, more oblique, and slightly curved; uniting with the third branch of the median vein; closing the discoidal cell almost in a right angle; this third branch being angulated at the point of junction, which is at the same distance from the origin of the third branch as between the first and second branches.

Hind Wings nearly semicircular; the outer angle rounded. Costal margin much arched. Outer margin slightly scalloped. The veins arranged as in *Orinoma*. The discoidal cell not extending more than two fifths of the length of the wing, and closed by a slightly curved outer disco-cellular vein, united to the median vein at the origin of its third branch.

Fore Legs of the male small, moderately feathered; the divisions being of nearly equal length and thickness.

Four Hind Legs long and strong, scaly, with very few hairs. Tibia nearly as long as the femur, with two rows of small spines beneath; tibial spurs long and very acute. Tarsus with several rows of short spines beneath and at the sides. Ungues strong, acute, simple, very much curved. Paronychiae minute, bifid.

ABDOMEN elongate, rather narrow.

The fine insect which is the type of this genus is, like the last described, a native of the East Indies, and might easily, from its general appearance and colouring, be mistaken for a species of *Opsiphanes*, or some of the allied genera of *Morphidæ*; its hairy palpi, however, and the arrangement of the veins of the wings, as well as their ocellated character, refer the insect to the present family, from most of which it is known by the slightly swollen base of the veins of the fore wings, large size, and peculiar style of the markings. On the under side the wings are rather paler brown, each marked near the outer angle with a large ocellus, that in the fore wings

accompanied by four small white spots, and that of the hind wings followed by four very small eyelets, beyond which the wings are irrorated with pale lilac scales, with a brown border bearing two narrow very much waved black submarginal streaks.

NEORINA.

1. NEOR. HILDA.

Neorina Hilda Westw. MS.; Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 65. f. 2.
East India, Darjeeling. B. M.

Genus XIV. TISIPHONE.

TISIPHONE *Hübner*, p.
MORPHO p. *Godt.*

BODY robust, hairy; wings large; fore ones subtriangular; hind ones beneath with a series of equal-sized ocelli.
HEAD moderate-sized, with a small frontal tuft.

Eyes prominent, naked.

Labial Palpi moderate-sized, scaly, compressed; the fore part destitute of hairs, hind part with short hairs; elevated obliquely, the tip being a little higher than the top of the eyes, and porrected as far in front as the length of the head; middle joint much curved at the base; terminal joint small, oblong, obtuse at the tip.

Antennæ scarcely more than one third of the length of the fore wings, very slender, cylindrical, with the joints indistinct, terminated by a short and very slender club, finely carinated beneath within.

THORAX robust, hairy, ovate.

Fore Wings large, subtriangular. Fore margin strongly curved; apical angle slightly rounded. Apical margin two thirds of the anterior, nearly straight, very slightly scalloped; anal angle rounded. Inner margin straight, as long as the apical one. The three principal veins are slightly dilated at the base. The costal vein extends to the middle of the costa. The postcostal vein has its first and second branches arising before, and the third considerably beyond, the extremity of the discoidal cell; the fourth branch arises at about five sixths of the length of the wing; and the terminal part of the vein extends to the tip of the wing. Upper disco-cellular vein very short, oblique, arising at about half the length of the wing: middle disco-cellular short, more transverse: lower disco-cellular much longer and more oblique, terminating the discoidal cell in nearly a right angle with the basal portion of the third branch of the median vein, with which it is united at the same distance from its origin as exists between the first and second branches of the median vein.

Hind Wings broadly ovate, rounded at the outer and anal angles. Outer margin scalloped. Precostal vein arising exactly opposite to the origin of the postcostal. Upper disco-cellular vein short, about equal in length to the space between its origin and that of the first postcostal branch, slightly curved: lower disco-cellular much longer, straight, closing the discoidal cell in rather an acute point before the middle of the wing, by uniting with the third branch of the median vein at a little distance beyond its origin.

Fore Legs of the male small, pectoral, but slightly feathered. Tarsus equal to the tibia in length and thickness, without unguis or articulations.

Four Hind Legs rather short, scaly. Tibia finely spined on the under side beneath; spurs short, slender. Tarsi with several rows of short spines beneath at the sides. Ungues small, very much curved, furnished beneath near the tip with a small distinct tooth. Paronychia minute.

ABDOMEN short, ovate.

The scaly palpi of the type of this genus probably induced M. Godart to introduce it amongst the Morphidæ. The slenderness of the antennæ, the ocellated under surface of the wings, the somewhat swollen base of the veins of the fore wings, and especially the bifid structure of the unguis, evidently, however, justify Hübner in placing it amongst the Satyridæ. He has, nevertheless, united in the same genus several other insects which have but little affinity with the fine Mexican insect represented in our Pl. LXIII. f. 2.

The insects which he has indicated or figured as congeneric are, the Australian *S. Abeona* (Zelinde *Hb.*) and *Acanthe*, the European *Pasiphae* (*Salome Fab.*, closely allied to *Hyperanthus*), the South African *Meneris Tulbaghia*, and the Indian *Cordace*. The arrangement of the veins of the wings in *M. Tulbaghia* is very similar to that of *Tisiphone*; and the palpi in the former insect are very hairy, as well as the eyes. These insects, consequently, seem to form a point of connexion between the Nymphalidæ and Satyridæ.

TISIPHONE.

1 TIS. HERCYNÆ.

(*Oreas marmorata*) *Tisiphone Hercynæ Hübner, Samml. exot. Schm. Band i. pl. —;*
Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 63. f. 2.
Morpho Anosia Godart, Enc. M. ix. p. 452. n. 36.
Brazil, Peru, Mexico. B. M.

Genus XV. ORESSINOMA.

ORESSINA *E. Doubleday MS.*OCALIS *Boisduval MS.*EUPTYCHIA? *E. Doubl. List Lep. Brit. Mus.*

BODY very small, slender, hairy; wings large, triangular, with a broad central white bar; hind ones beneath with deep fulvous submarginal lunules.

HEAD small, clothed with loose hairs.

Eyes prominent, naked.

Antennæ about two fifths of the length of the fore wings, very slender, composed of but very few joints, the basal portion having the joints elongated, scarcely distinct, annulated with white; the twelve terminal joints much shorter, and forming a slender curved club finely carinated beneath.

Labial Palpi slender, very compressed, very thickly hairy in front, the hairs set on at right angles, porrected obliquely nearly to the level of the top of the eyes, and extending in front nearly as far as the length of the head; terminal joint very slender, acute, elongate-ovate, scarcely hairy.

THORAX small, oval, finely hairy.

Fore Wings large, triangular. Fore margin slightly curved; apical angle obtuse. Apical margin three fourths of the length of the anterior, very slightly convex; hinder angle rounded. Inner margin straight, nearly as long as the apical one, but slightly clothed with scales. Median and postmedian veins very greatly swollen at the base. Costal vein reaching the costa a little beyond the middle of the wing. Postcostal vein with its first branch arising a little before the middle of the wing, before the extremity of the discoidal cell; second branch arising at about the same distance beyond the cell; third and fourth branches arising at equal distances apart; the terminal part of the vein running into the rounded part of the tip; the extremity of the upper discoidal vein extending to the extremity of the convex portion of the tip. Upper disco-cellular vein extremely short, transverse, arising at about half the length of the wing: middle disco-cellular much longer curved; the tip being directed outwards: lower disco-cellular rather longer, straight, oblique, terminating the discoidal cell about the middle of the wing in almost a right angle, formed by its union with the basal part of the third branch of the median vein, which is angulated at the place of junction, which is at a considerable distance from its origin; the space between the first and second branches of the median vein considerably elongated, and equal in length to the space between the base of the wing and the first branch.

Hind Wings large, subtriangular. Costal margin nearly straight, except at the base, where it is greatly elbowed, so that the costal vein, which follows its outline, is much bent near its origin, but does not extend half the length of the costa; outer angle rounded. Outer margin with three rather deep scallops, fringed with hairs rather than scales; anal angle obtuse. Postcostal vein branching at a short distance from the base of the wing, the branch extending to the outer angle. Upper disco-cellular vein arising at a very short distance beyond the branch of the postcostal, curved obliquely: lower disco-cellular rather longer, straighter; uniting with the third branch of the median vein at a very short distance from its origin, closing the discoidal cell at scarcely more than two fifths of the length of the wing in an acute point. First branch of the median vein extending to the anal angle. The postmedian vein running into the anal margin, a little distance beyond the extremity of the abdomen.

Fore Legs of the male extremely small and delicate. The femur nearly equal in length to the tibia and tarsus united; the two latter clothed with long very fine hairs. Tarsus small, destitute of joints and claws. *Fore Legs* of the female much longer than in the male, very slender, scaly, with scarcely any hairs. Tarsus as long as the tibia, much dilated at the tip where are several short spines indicating the joints.

Four Hind Legs slender, scaly, scarcely hairy. Tibia and tarsi nearly destitute of short spines beneath; tibial spurs not distinct. Tarsus rather longer than the tibia. Claws small, slender, very much curved, acute, entire. Paronychia minute, bifid at the tip; outer division very slender.

ABDOMEN elongate, slender, hairy.

The type of this genus is a plain but delicate butterfly, a native of Colombia and New Grenada, remarkable for the very broad white band across all the wings, which are but slightly clothed with scales; the basal portion of the wing is pale brown, thickly marked with minute darker transverse streaks, and the dark brown margin is elegantly varied beneath with a fulvous striga edged with white, parallel to the apical margin in the fore wings, but very strongly waved in the outer portion of the hind wings, both wings being destitute of ocelli, whence the specific name of the insect. Structurally this genus is distinguished by the greatly swollen base of the median and submedian veins of the fore wings, the position of the second branch of the postcostal vein in the same wings arising beyond the extremity of the discoidal cell, the strongly angulated base of the hind wings beneath, the very hairy palpi, and the slender acute simple claws at the extremity of the tarsi.

April 1. 1851.

5 E

ORESSINOMA.

1. ORESS. TYPHLA.

Satyrus Typhla *Klug MS.*; *Boisduval* (*Ocalis* T.).
Oressinoma Typhla *E. Doubleday MS.*; *Doubl. Westw. & Hewits. Gen. Diurn. Lep.* pl. 62. f. 5.
 New Grenada, Colombia. B. M.

Genus XVI. EUPTYCHIA.

EUPTYCHIA *Hübner, Verz.*

EUPTYCHIA and *CISSIA* *E. Doubl. List. Lep. Brit. Mus.*

OREADES STRIGATÆ *Hübner, olim.*

SATYRUS *p. Godt.*

BODY slender; wings large, not thickly clothed with scales, transversely striated; palpi densely pilose in front.
HEAD rather small, very hairy, but not tufted in front.

Eyes prominent, very hairy.

Antennæ short, not half the length of the fore wings, cylindrical; the joints being scarcely distinct above, annulated with white beneath; terminated by a slender, rather short club, composed of about twelve of the terminal joints, which are more distinct than those at the base.

Labial Palpi porrected obliquely; the tip elevated above the level of the eyes, and advanced in front nearly as far as the length of the head; the middle joint thickly clothed with long hairs, set on at right angles, without any tuft on the back of the joint; the terminal joint small, elongate, pointed at the tip, and porrected in the same line as the second joint.

THORAX small, densely hairy.

Fore Wings large, subtriangular, much less thickly clothed with scales than ordinary. Costal margin not strongly arched; apical angle rounded. Apical margin straight, or but slightly convex; hinder angle obtuse. Inner margin straight, about equal in length to the apical. Costal vein very much swollen at the base, reaching the costa at about half the length of the wing. Postcostal vein with its first two branches arising before the anterior extremity of the discoidal cell (the second sometimes, however, being very close to it); the third branch arising at about one third, and the fourth at about two thirds, of the distance between the end of the cell and the tip of the wing; the terminal part of the vein not extending to the outermost part of the convex apex to which the upper discoidal vein extends. Upper disco-cellular very short, transverse: middle disco-cellular much longer, rather curved, especially nearer its base: lower disco-cellular rather longer, nearly straight, and continuous with the extremity of the middle one; closing the discoidal cell transversely considerably beyond the middle of the wing; uniting with the third branch of the median vein at some distance from its base, the latter branch being angulated at the place of junction. Median vein with its base swollen nearly as much as the base of the costal vein; its first branch arising nearer the base of the wing than ordinary, so that the space between the origin of the first and second branches is elongated, and nearly equal to the space between the base and the first branch. Submedian vein sinuated, and very slightly thickened at the base.

Hind Wings moderate-sized, triangularly subovate. Costal margin considerably angulated near the base, subemarginate before the angle, beyond which it is nearly straight; outer angle rounded. Outer margin slightly scalloped, neither angulated nor tailed. Precostal vein very short, bent outwardly. Costal vein not extending beyond the middle of the costa. Postcostal vein arising beyond the origin of the precostal, branching at a moderate distance from the base. Upper disco-cellular arising a little beyond the base of the branch, oblique, slightly curved: lower disco-cellular rather longer than the upper, also oblique, and slightly arched; uniting with the third branch of the median vein at a little distance beyond its origin; closing the discoidal cell in rather an acute point at some distance beyond the middle of the wing.

Fore Legs of the male very minute, thickly clothed with long hairs, forming a dense brush. Tarsus much shorter than the tibia. *Fore Legs* of the female slender, much longer than those of the male, scaly. Tarsus nearly equal to the tibia in length, rather compressed and dilated at the tip, where it is furnished with several rather strong divaricating spines, indicating the terminal articulations.

Four Hind Legs short, slender, scaly. Tibia and tarsus armed beneath with several rows of short spines and setæ. Tibial spurs of moderate size. Ungues small, slender, acute; extending but a very short distance beyond the apical setæ and scales of the tarsus, beneath which they are concealed.

ABDOMEN small and slender.

This is an extensive group of small butterflies, which appears to be confined to Brazil and the hottest parts of the New World, generally of dull uniform colours, but being elegantly glossed with purple and blue tints in some of the species, especially *E. Junia* and *Lysidice*. The upper surface of the wings is rarely marked with ocelli; but, on the under surface, all the wings are traversed by dark bars, or more rarely by narrower simple lines, and the extremity of the wings, especially the hind pair, is marked with a row of beautiful ocelli, the centres of which are often ornamented with patches of burnished silver. From most of the preceding genera the present is distinguished by the densely hairy compressed palpi, and the strongly swollen base of the costal and median veins of the wings; and from *Oressinoma*, it is at once separated by the second branch of the postcostal vein of the fore wings arising before the extremity of the discoidal cell, and especially by the ocellated condition of the under surface of the wings, and hairy eyes. From *Neonympha*, this genus appears to be separated by the median vein having the base as strongly dilated as the costal one, by the subdiaphanous wings, and by the very hairy eyes.

EUPTYCHIA.

1. EUPT. OCIRRHOE.

- Papilio Ocirrhoe Fabricius, Gen. Ins. p. 260. (1776), Ent. Syst. iii. pt. 1. p. 96. n. 297.*
Satyrus Ocirrhoe Godart, Enc. M. ix. p. 489.
Oreas (strigata) Ocirrhoe Hübner, Samml. exot. Schm. Band i. pl. —.
Papilio Cissia Cramer, Pap. iii. p. 3. pl. 194. f. D.E. (1782); E. Doubl. List Lep. Brit. Mus. p. 122. (Euptychia C.).
Papilio Hesione Sulzer, Hist. Ins. t. 17. f. 3, 4.
 Brazil, Honduras, Caraccas. B. M.

2. EUPT. LYDIA.

- Papilio Lydia Cramer, Pap. pl. 148. f. C.C. (but not of Fabricius, Ent. Syst. iii. pt. 1. p. 135.); Godart, Enc. M. ix. p. 489. (Satyrus Lydius).*
 Surinam.

3. EUPT. CLUENA.

- Papilio (N. Ph.) Cluena Drury, Ill. App. vol. iii. pl. 7. f. 5, 6.*
Papilio Clueria Fabricius, Ent. Syst. iii. pt. 1. p. 229. n. 716.; Godart, Enc. M. ix. p. 492. n. 51. (Satyrus Cl.); E. Doubleday, List Lep. Brit. Mus. p. 122. Euptychia Cl.).
 Brazil. B. M.

4. EUPT. GERA.

- Euptychia Gera Hewitson in Annals of Nat. Hist. n. ser. vol. vi. p. 439.; Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 63. f. 4.*
 River Amazon. B. M.

5. EUPT. MYNCEA.

- Papilio Myncea Cramer, Pap. pl. 293. f. C.; Godart, Enc. M. ix. p. 488. n. 36. (Satyrus M.); Hübner, Verz. bek. Schm. n. 516. (Euptychia M.).*
 Guiana, Brazil. B. M.

6. EUPT. CLARISSA.

- Papilio Clarissa Cramer, Pap. pl. 293. f. D.E.; Hübner, Verz. bek. Schm. n. 503. (Euptychia Cl.).*
Papilio Penelope Fabricius, Ent. Syst. iii. pt. 1. p. 96. n. 298.; Godart, Enc. M. ix. p. 489. n. 39.
 Guiana, Para. B. M.

7. EUPT. CRANTOR.

- Papilio Crantor Fabricius, Ent. Syst. iii. pt. 1. p. 158. n. 489.; Jones, Icones, iv. t. 18. f. 1.; Donovan, Ins. of India, pl. 37. f. 4. (edit. Westwood); Godart, Enc. M. ix. p. 488. n. 37.*
 Brazil, Pernambuco, Honduras. B. M.

8. EUPT. PAGYRIS.

- Satyrus Pagyris Godart, Enc. M. ix. p. 416. n. 46.*
Satyrus argenteus Swainson, Zool. Illustr. 1st ser. vol. iii. pl. —.
 Brazil. B. M.

9. EUPT. BYSES.

- Satyrus Byses Godart, Enc. M. ix. p. 496. n. 67.*
 Brazil. B. M.

10. EUPT. OCYPETE.

- Papilio Ocypete Fabricius, Gen. Ins. Mant. 260., Ent. Syst. iii. pt. 1. p. 96. n. 296.; Hübner, Verz. bek. Schm. n. 506. (Euptychia Oc.); Godart, Enc. M. ix. p. 488. n. 34.*
Papilio Helle Cramer, Pap. pl. 194. f. F.G.
 Surinam.

11. EUPT. HERSEIS.

- Satyrus Herseis Godart, Enc. M. ix. p. 495. n. 60.*
Papilio Herse Cramer, Pap. pl. 10. f. C.D. (but not of Fabricius).
 Guiana, Brazil. B. M.

12. EUPT. LYSIDICE.

- Papilio Lysidice Cramer, Pap. pl. 169. f. C.D.; Godart, Enc. M. ix. p. 583. n. 92. (Erycina L.); Hübner, Verz. bek. Schm. n. 507.; Fabricius, Ent. Syst. iii. pt. 1. p. 156. n. 480.; Hübner, Samml. exot. Schm. Bd. i. pl. —.*
 Surinam.

13. EUPT. DORIS.

- Papilio Doris Cramer, Pap. pl. 8. f. B.C.; Fabricius, Ent. Syst. iii. pt. 1. p. 101. n. 314.*
Satyrus Doritis Godart, Enc. M. ix. p. 493. n. 53.
Euptychia Lysidice fem. Hübner, Verz. bek. Schm. n. 507.
 Guiana, Brazil.

14. EUPT. NECYS.

- Satyrus Necys Godart, Enc. M. ix. p. 511. n. 100.*
 Brazil, Venezuela. B. M.

15. EUPT. TRICOLOR.

- Euptychia tricolor Hewitson in Annals of Nat. Hist. n. ser. vol. vi. p. 440.; Doubl. Westw. & Hewits. Gen. Diurn. Lep. pl. 65. f. 3.*
 River Amazon. B. M.

16. EUPT. EBUSA.

- Papilio Ebusa Cramer, Pap. pl. 292. f. F.G.; Hübner, Verz. bek. Schm. n. 515. (Euptychia Eb.); E. Doubl. List Lep. Brit. Mus. p. 123.*
Papilio Aranea Fabricius, Ent. Syst. iii. pt. 1. p. 97. n. 299.; Godart, Enc. M. ix. p. 492. (Satyrus Ar.).
 Guiana, Brazil. B. M.

17. EUPT. LEA.

- Papilio Lea Cramer, Pap. pl. 151. f. C.D.; Godart, Enc. M. ix. p. 492. n. 50.*
 Surinam.

18. EUPT. JUNIA.

- Papilio Junia Cramer, Pap. pl. 292. f. D.E.; Hübner, Zutr. exot. Schm. f. 627, 628.*
Satyrus Lea var. Godart, Enc. M. ix. p. 492. n. 50.
An E. Lea alt. sexus?
 Bahia, Surinam.

19. EUPT. TOLUMNIA.

- Papilio Tolumnia Cramer, Pap. pl. 130. f. F.G.; Fabricius, Spec. Ins. ii. p. 85. n. 374., Ent. Syst. iii. pt. 1. p. 107. n. 330.; Hübner, Verz. bek. Schm. n. 515.; Godart, Enc. M. ix. p. 491. n. 48.*
 Guiana, Bahia. B. M.

20. EUPT. CHLORIS.

- Papilio Chloris Cramer, Pap. pl. 293. f. A.B.*
Satyrus Tolumnia fem. Godart, Enc. M. ix. p. 491.
Euptychia Chlorimene Hübner, Verz. n. 514.
 Brazil. B. M.

21. EUPT. MÆPIUS.

- Satyrus Mæpius Godart, Enc. M. ix. p. 490. n. 45.*
 Guiana.

22. EUPT. CANTHE.

- Oreas (strigata) Canthe Hübner, Samml. exot. Schmett. Band i. pl. —. (but not P. Canthus Linn.).*
 Brazil?

- | | |
|---|---|
| <p>23. EUPT. PÆON.
Satyrus Pæon <i>Godart, Enc. M. ix. p. 490. n. 43.</i>
Brazil.</p> <p>24. EUPT. BRIXIUS.
Satyrus Brixius <i>Godart, Enc. M. ix. p. 490. n. 42.</i>
Brazil.</p> <p>25. EUPT. ARCHEBATES.
Satyrus Archebates <i>Ménétries, Nouv. Mém. Soc. Nat. Moscou, iii. p. 38.</i>
Antilles.</p> <p>26. EUPT. CELINIS.
Satyrus Celinis <i>Godart, Enc. M. ix. p. 489. n. 38.</i>
Brazil.</p> <p>27. EUPT. ARGANTE.
Papilio Argante <i>Cramer, Pap. pl. 204. f. C. D.</i>
Satyrus Argulus <i>Godart, Enc. M. ix. p. 488. n. 35.</i>
Surinam.</p> | <p>28. EUPT. DOXES.
Satyrus Doxes <i>Godart, Enc. M. ix. p. 493. n. 54.</i>
Brazil.</p> <p>29. EUPT. ? HERMES.
Papilio Hermes <i>Fabricius, Syst. Ent. p. 487. n. 195., Ent. Syst. iii. pt. 1. p. 158. n. 486.; Godart, Enc. M. ix. p. 487. n. 33. (Satyrus H.).</i>
Euptychia Hermessa <i>Hübner, Verz. bek. Schm. n. 508.</i>
Guiana, Brazil. B. M.</p> <p>30. EUPT. ANTONOE.
Papilio Antonoe <i>Cramer, Pap. pl. 60. f. E. F.</i>
Brazil. B. M.</p> <p>31. EUPT. LIBYE.
Papilio Libye <i>Linnaeus, Syst. Nat. ii. p. 772. Papilio n. 146.; Sulzer, Gesch. pl. 17. f. 7.</i>
India?</p> |
|---|---|

Genus XVII. NEONYMPHA.

NEONYMPHA *E. Doubleday.*
NEONYMPHA and MEGISTO *Hübner, Verz.*
SATYRUS Sect. H., p. *Godt.*

BODY small, hairy; wings large, not subdiaphanous, uniformly coloured above, and more or less ocellated and strigose, especially beneath.

HEAD small, very slightly hairy.

Eyes moderate, naked, or scarcely hirsute.

Antennæ very short, composed of short joints, annulated with white; terminated by a moderately robust and elongated club, composed of shorter articulations.

Labial Palpi nearly resembling those of Euptychia, but longer, and more densely clothed in front with long straight bristly hairs; terminal joint elongate, and very slender.

THORAX oval, very finely hairy.

Fore Wings large, entire, fringed with fine hairs. Costal margin slightly arched; apical angle well rounded. Apical margin more than two thirds of the length of the costal, convex; hinder angle rounded. Inner margin nearly straight. Veins very delicate. Costal vein very greatly swollen at the base for a considerable length; united to the costa at about three fifths of its length from the base. Postcostal vein with its first branch arising exactly at the anterior extremity of the discoidal cell; the second, third, and fourth branches at equal distances apart, beyond the end of the cell. Upper disco-cellular vein short, very oblique, arising at about half the length of the wing: middle disco-cellular equal to the upper one in length, but transverse: lower disco-cellular continuous with the middle one, but rather curved, and much longer; closing the discoidal cell transversely near the middle of the wing, and joining the third branch of the median vein at a short distance from its base, this third vein being gradually arched from the base. Base of the median vein scarcely swollen, or not swollen so much as the costal.

Hind Wings subtriangular. Costal margin arched; outer angle rounded; anal angle rather obtuse. Outer margin entire, fringed with long hairs. Precostal vein very short, slender, and bent outwards. Costal vein short, not extending to the middle of the costa. Postcostal vein arising just opposite to the precostal, and branching at some distance from the base; its tip extending to the outer angle of the wing. Upper disco-cellular short, oblique, arising at a very short distance beyond the branch of the postcostal: lower disco-cellular more than twice the length of the upper, with which it is continuous, and oblique; closing the discoidal cell in rather an acute point, beyond the middle of the wing, by its junction with the third branch of the median vein at a very short distance beyond its origin. Submedian vein extending to the anal angle.

Fore Legs of the male extremely small and feathery, being clothed with long delicate hairs. *Fore Legs* of the female scarcely larger than those of the male, slightly feathered. Tarsus not dilated at the tip, which has a few small spines beneath.

Four Hind Legs rather short, scaly. Femur very slightly clothed with hairs. Tibia with short fine spines in two rows beneath; tibial spurs distinct. Tarsus scaly, armed beneath at the sides with several rows of longer fine spines. Claws very much curved, entire, slender. Paronychia almost resembling the claws. Pulvillus rather broad.

CATERPILLAR elongated, rather thickest in the middle, longitudinally strigose; tail bifid.

CHRYSALIS short and thick, with the head-case rather incurved and obtuse (as represented in Abbott's figures, copied by Smith and Leconte).

The insects of this genus bear considerable resemblance to those of *Euptychia*; but they are generally larger, the wings more thickly clothed with scales, the median vein of the fore wings scarcely dilated at the base, the branches of the postcostal vein differently arranged, the eyes naked, or scarcely hairy. They are generally of uniform dull colours above, or with one or more ocelli; beneath, however, they are more varied with longitudinal transverse strigæ, and more beautiful ocelli, often marked with silvery scales or patches.

Like the *Euptychiæ*, these insects appear to be confined to the New World; but they seem to be attached to more moderate climates, several of the typical species occurring in the United States, where their transformations have been observed by Abbot of Georgia. Messrs. Leconte and Boisduval have published illustrations of the metamorphoses of the following species: *Neon. Eurytris*, *Gemma*, *Sosybius*, and *areolatus*. The Caterpillar of *N. Eurytris* resembles that of *S. Alope*, having the body longitudinally striped, and the tail pointed; but the Pupa is different, having the head-case incurved, and apparently not bifid. *N. Gemma* and *N. Sosybius* have the body similarly striped, with the tail acutely bifid, and directed rather obliquely upwards; the head-case of the Pupa in these is also obtuse. The larva of *S. Areolatus* is similar in general form, but the head has two short points at the sides. It feeds on the *Andropogon nutans*, and is of a dark green colour, with paler longitudinal stripes. The Chrysalis is greenish. The Perfect Insect appears in June.

The species appear to be very numerous, there being many unnamed and undescribed in our collections. Several of the species taken up in the following list from Fabricius and the *Encyclopédie Méthodique* may possibly be ascertained not to be congeneric.

NEONYMPHA.

1. NEON. EURYTRIS.

Papilio Eurytris Fabricius, Ent. Syst. iii. pt. 1. p. 157. n. 485.; Godart, Enc. M. ix. p. 494. n. 57. (Satyrus E.); Leconte & Boisduval, Icon. Lep. Am. Sept. pl. 61. Papilio Eurytus Fabricius, Syst. Ent. p. 487. n. 194. Papilio Cymela Cramer, Pap. pl. 13. f. C.D.; Hübner, Verz. bek. Schm. n. 517. (Megisto C.).
United States. B. M.

2. NEON. SOSYBIUS.

Papilio Sosybius Fabricius, Ent. Syst. iii. pt. 1. p. 219. n. 684.; Jones, Icones, vi. t. 52. f. 2.; Godart, Enc. M. ix. p. 495. n. 63. (Satyrus S.); Boisduval & Leconte, Icon. Lep. Am. Sept. t. 63. f. 1—4.
Honduras, Florida, Colombia. B. M.

3. NEON. CAMERTA.

Papilio Camerta Cramer, Pap. pl. 195. f. 8.
Guiana, Brazil.

4. NEON. PACARUS.

Satyrus Pacarus Godart, Enc. M. ix. p. 495. n. 61.
Brazil.

5. NEON. PERIPHAS.

Satyrus Periphas Godart, Enc. M. ix. p. 495. n. 62.
Brazil.

6. NEON. AREOLATUS.

Papilio areolatus Abbot & Smith, Lep. Georgia, p. 25. t. 15.; Godart, Enc. M. ix. p. 494. n. 58. (Satyrus ar.); Leconte & Boisduval, Icon. Lep. Am. Sept. pl. 63. f. 5—8. Oreas (fimbriata) Helicta Hübner, Samml. exot. Schm. Band i. pl. —, Verz. bek. Schm. n. 622.
Georgia, United States. B. M.

7. NEON. PHOCION.

Papilio Phocion Fabricius, Ent. Syst. iii. pt. 1. p. 218. n. 689.; Godart, Enc. M. ix. p. 494. n. 59.
—?

8. NEON. GEMMA.

Neonympha Gemma Hübner, Zutrage, exot. Schm. f. 7, 8.; Boisduval & Leconte, Icon. Lep. Am. Sept. t. 62. (Satyrus G.).
United States. B. M.

9. NEON. GEMMULA.

Satyrus Gemmula Boisduval MS.; E. Doubleday, List Lep. Brit Mus. App. p. 33.
Brazil. B. M.

10. NEON. GRIMON.

Satyrus Grimon Godart, Enc. M. ix. p. 491. n. 44.; E. Doubleday, List Lep. Brit. Mus. App. p. 33.
Para. B. M.
May 1. 1851.

11. NEON. HERMES.

Papilio Hermes Fabricius, Ent. Syst. iii. pt. 1. p. 158. n. 486.; Godart, Enc. M. ix. p. 487. n. 33.; E. Doub. List Lep. Brit. Mus. p. 138. (Neon. H.).
Pernambuco. B. M.

12. NEON. ANTONOE.

Papilio Antonoe Cramer, Pap. pl. 60. f. E. F. Satyrus Hermes Godart, Enc. M. ix. p. 487.; E. Doub. List Lep. Brit. Mus. p. 138. (Neon. A.).
Pernambuco, Bahia. B. M.

13. NEON. CANTHUS.

Papilio Canthus Linnæus, Syst. Nat. ii. p. 768. n. 129.; Fabricius, Ent. Syst. iii. pt. 1. p. 157. n. 484. Satyrus Canthus and Cantheus Godart, Enc. M. ix. p. 493. n. 35, 36.; Boisduval & Leconte, Icon. Lep. Am. Sept. pl. 60. Papilio Euridice Linnæus, Amæn. Acad. t. 6. p. 406. n. 65.
United States.

14. NEON. ACMENIS.

(Oreas strigata) Megisto Acmenis Hübner, Zutrage exot. Schm. f. 233, 234.
Baltimore.

15. NEON. COSMOPHILA.

(Oreas fimbriata) Neonympha Cosmophila Hübner, Zutrage exot. Schm. f. 255, 256.
Bahia.

16. NEON. CLERIMENE.

Papilio Clerimene Stoll, Suppl. Cramer, pl. 13. f. 2. 2 B.; Hübner, Verz. bek. Schm. n. 624. (Neon. Cl.).
Surinam.

17. NEON. MOLLINA.

(Oreas strigata) Euptychia Mollina Hübner, Zutrage Samml. exot. Schm. f. 105, 106.; E. Doub. List Lep. Brit. Mus. App. p. 31. (Euptychia M.); Hübner, Verz. n. 509.
Brazil, Honduras, Venezuela. B. M.

18. NEON. PHARES.

Satyrus Phares Godart, Enc. M. ix. p. 491. n. 47. Neonympha Phares E. Doubleday MS.; Doubl. Westw. & Hewits, Gen. Diurn. Lep. pl. 67. f. 4.
Brazil. B. M.

19. NEON. FLORIMEL.

Papilio Florimel Fabricius, Ent. Syst. iii. pt. 1. p. 215. n. 673.; Jones, Icones, vi. t. 50. f. 2.; Donovan's Drawings in Bibl. Hope, Oxford; Godart, Enc. M. ix. p. 512. n. 106. (Satyrus Fl.).
—?

20. NEON. GALEBUS.
Satyrus Galesus Godart, *Enc. M.* ix. p. 496. n. 64.
Brazil.
21. NEON. PHRONIUS.
Satyrus Phronius Godart, *Enc. M.* ix. p. 496. n. 65.
Brazil.
22. NEON. ? POLIXENES.
Papilio Polixenes Fabricius, *Ent. Syst.* iii. pt. 1. p. 152.
n. 466.
North America.
23. NEON. QUANTIUS.
Satyrus Quantius Godart, *Enc. M.* ix. p. 487. n. 31.
Brazil.

24. NEON. PERIBÆA.
Papilio Peribæa Fabricius, *Ent. Syst.* iii. pt. 1. p. 234.
n. 730.
Satyrus Peribas Godart, *Enc. M.* ix. p. 486. n. 29.
Surinam.
25. NEON. HALYMA.
Papilio Halyma Fabricius, *Ent. Syst.* iii. pt. 1. p. 243.
n. 758.
Satyrus Halyma Godart, *Enc. M.* ix. p. 487. n. 32.
West Indies.
- (Subg. nov. RAGADIA.)
26. NEON. ? (RAGADIA) CRISIA.*
Euptychia Crisia Hübner, *Zutr.* f. 675, 676.
Hipparchia Makuta Horsfield, *Lep. E. I. C.* pl. 5. f. 9. 9 a.
Java. B. M.

* This species is placed here provisionally, not only on account of its being a native of the Eastern hemisphere, but from the very singular arrangement of the veins of its wings, especially of the hind pair; the lower disco-cellular vein being placed almost at the base of the wing, and furnished with an elongated pouch in the males. The costal vein of the fore wings is alone swollen at the base.

Genus XVIII. EREBIA.

EREBIA p. *Dalman.*
EREBIA *Boisduval, H. Schaffer, E. Doubleday.*
OREINA *Westwood.*

BODY moderately robust, hairy; wings generally black or dark brown; the anterior often with one or more fulvous or red patches near the extremity, bearing ocelli.

HEAD moderate-sized, clothed with very long hairs.

Eyes prominent, lateral, naked; the anterior half differently coloured from the posterior in dried specimens.

Labial Palpi porrected obliquely; the tips ascending higher than the level of the tops of the eyes, and reaching further in front than the length of the head; very densely clothed with long hairs, extended in front at right angles, and almost concealing the terminal joint, which is slender, short, and villose.

Antennæ not half the length of the fore wings, slender, the joints scarcely distinct; terminated by an oval, rather short, but gradually formed club, which in some species (*Epistigne*, &c.) is short, broad, and spoon-shaped; its basal portion hollowed within, but its extremity curved outward and obtuse.

THORAX short, oval, very hairy.

Fore Wings triangularly ovate, entire, and convex along the apical margin. The costal margin but slightly arched; apical angle rounded. Apical margin about three fourths of the length of the costal; hinder angle rounded. Inner margin scarcely as long as the apical, nearly straight. Costal vein extending rather beyond the middle of the costa, slightly swollen at the base, or not thicker than the rest. Postcostal vein slender; its first and second branches arising before the anterior extremity of the discoidal cell (the second sometimes close to it, or even slightly beyond it, as in *Epistigne*); the third and fourth branches free, arising at a greater or less distance apart, beyond the cell. Upper disco-cellular vein generally obliterated (in *Blandina* it is, however, present, but very short and transverse: middle disco-cellular shorter than the outer one, but rather variable in its direction (being shorter, straight, and transverse in *Epistigne*, whilst it is arched in *Blandina*): outer disco-cellular vein considerably longer, nearly straight, but oblique, its extremity being directed towards the apical margin; closing the discoidal cell almost transversely nearly at the middle of the wing; uniting with the third branch of the median vein at a shorter distance from its base than exists between the first and second branches; the third branch being angulated at the place of junction, beyond which it is nearly straight. The median and postmedian veins not dilated at the base.

Hind Wings suboval, entire along the anal margin. The outer margin also entire, or but slightly scalloped; beneath often marked with dark freckles, with a broader dark subcentral fascia. Subcostal vein arising nearer the body than the precostal; its branch arising at a moderate distance from the base of the wing. The upper disco-cellular vein longer than the space between its base and that of the branch, and sometimes rather arched: the lower disco-cellular considerably longer, straight, more oblique, uniting with the third branch of the median vein at a short distance from its base; closing the discoidal cell rather beyond the middle of the wing.

Fore Legs of the male extremely minute, concealed among the hairs of the breast, very densely hairy. The tarsus much shorter than the tibia, and very slender. *Fore Legs* of the female much longer, scaly, slender; the outside of the tibia and tarsus with a few rather long setæ. The tarsus nearly as long as the tibia, scaly, not very distinctly articulated; the extremity armed with fine setæ-like spines.

Four Hind Legs moderately long, slender, scaly. Femur clothed within with long hairs. Tibia armed with a

few spines, those on the sides beneath forming rows. Tarsus nearly as long as the tibia, more thickly and irregularly spined. Ungues simple. Pulvilli very minute.

ABDOMEN moderately short and slender.

CATERPILLAR rather robust, finely pubescent, longitudinally striated; head small; tail pointed, bifid.

The insects of this genus are very numerous, and are subject to great variations. They are distinguished from most of the preceding genera by having the principal veins of the fore wings either not at all swollen, or the costal vein alone slightly dilated at the base. From *Argyrophenga* they differ in their shorter, more triangular wings, and in having the first two branches of the postcostal vein arising before the anterior extremity of the discoidal cell (the second being close to its tip), whereas in *Argyrophenga* they both arise beyond the cell.

The name which is here adopted for the present genus was proposed by Dalman for the whole of the Swedish species of *Satyridae*; it is consequently in strictness a synonyme of *Satyrus* and *Hipparchia*; as such, I rejected it in my work upon the butterflies of Great Britain, proposing the name of *Oreina* in its stead, in allusion to the mountainous habits of the species. The name *Erebia* having, however, been employed in its present restricted sense by Boisduval, and adopted by Herrick Schäffer, E. Doubleday, &c., and having been also used in the plates of the present work illustrating this genus previously to my undertaking its completion, I have preferred sinking my own generic name, although satisfied of its propriety.

The species of this genus appear exclusively to inhabit the Alpine mountains and mountainous districts of Central Europe, being rarely found on the plains, except where the vegetation has an Alpine character. They do not occur on the more northerly mountains of Europe, where they are replaced by the species of *Chionobas*; nor on the mountains of the southern parts of Spain, Italy, and the Mediterranean islands. They constitute Duponchel's ninth and last group, named, from the same circumstance, *Alpicoles*; and may, as that author suggests, be divided into two groups, from the entire and scalloped hind wings, which correspond with Mr. J. F. Stephens's sections C. and D. of his genus *Hipparchia*. They constitute Hübner's two families *Umbrosæ* and *Subtinctæ* of his stirps *Oreades* (nearly equivalent to our family *Satyridae*), and are divided into the following genera or stirpes, chiefly from the varieties of colouring of the species. *OREADES UMBROSÆ*. 1. *Phorcis*—*Epistigne*, &c. 2. *Epigea*—*Euryale*, *Ligea*, &c. 3. *Syngea*—*Pronoe*, &c. 4. *Marica*—*Stygne*, &c. 5. *Ypthima* p.—*Manto*, &c. 6. *Melampias*—*Cassiope*, &c.—*OREADES SUBTINCTÆ*. 1. *Gorgo*—*Ceto*, &c. 2. *Maniola*—*Phegea*, &c.

The extra-European species are found in similarly moderate climates, such as Canada, Chili, and the Cape of Good Hope.

The Caterpillar of *Erebia Medusa* is figured by Hübner and Godart; it is green, with whitish and dark green longitudinal stripes, and feeds on *Panicum sanguinale*: that of *E. Medea* is stated in the *Wiener Verzeichniss* to feed on *Dactylis glomerata*. The Caterpillar of *E. Ligea* is figured by Hübner and Godart; it is also green, with a dark dorsal line, and paler stripes on the sides.

EREBIA.

1. EREB. CASSIOPE.

Papilio Cassiope *Fabricius*, *Mant. Ins.* pt. 2. p. 42., *Ent. Syst.* iii. pt. 1. p. 238. n. 742.; *Hübner*, *Schm. Eur. Pap.* f. 626. 629.; *Ochsenh. Schm.* v. *Eur.* i. p. 261. n. 44.; *Godart*, *Enc. M.* ix. p. 535. n. 154., *Lép. France*, ii. t. 15. f. 1, 2.; *Boisduval*, *Ind. Meth.* p. 26. n. 195.; *Freyer*, *N. Beitr.* t. 20. f. 1, 2.; *Stephens*, *Ill. Haust.* i. 63. t. 8. f. 1—3.; *Westw. & Humphr. Brit. Butt.* pl. 22. fig. 9, 10.

Var. *Ereb. Nelamus* *Boisduval*, *Ind. Meth.* p. 26. n. 195. var.

Papilio Æthiops minor *Vill.* *Ent.* ii. p. 37.

Var. *Papilio Mnemon* *Haworth*, *Ent. Trans.* i. 332.

Papilio Melampus var. *Esper*, *Schmett.* i. 2. 131. t. 78. *Cont.* 28. f. 2.; *Newman*, *Zool.* 729., but not of *Fuessly*.

Melampias Rhodia *Hübner*, *Verz.* n. 611.

Alps, Scotland.

B. M.

2. EREB. EPIPHRON.

Papilio Epiphron *Knoch*, *Beytr.* iii. t. 6. f. 7.; *Fabricius*, *Ent. Syst.* iii. pt. 1. f. 235. n. 735.; *Ochsenh. Schm.* v. *Eur.* i. p. 258. n. 41.; *Godart*, *Lép. Fr.* i. 16. f. 3, 4.

Papilio Ianthe *Hübner*, *Schm. Eur. Pap.* f. 202., *Suppl.* (*H. Schäffer*) f. 92, 93, 94.

Erebia Cassiope var. *Boisduval*, *Ind. Meth.* n. 195.

Hercynia, Harz.

3. EREB. ARETE.

Papilio Arete *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 23. n. 743.; *Hübner*, *Schm. Eur. Pap.* f. 231, 232.; *Ochsenh. Schm.* v. *Eur.* i. p. 301. n. 64.

An var. *Blandinæ*?

Southern Alps.

4. EREB. PHARTE.

Papilio Pharte *Esper*, *Schmett.* t. 120. *Cont.* 75. f. 3, 4.; *Ochsenh. Schm.* v. *Eur.* i. p. 259.; *Hübner*, *Schm. Eur. Pap.* f. 491—494., *Suppl.* f. 95. (*H. Sch.*); *Godart*, *Enc. M.* ix. pt. 536. n. 156., *Lép. France*, *Suppl. Duponchel*, i. t. 34. f. 1, 2.; *Boisduval*, *Icon. Hist.* pl. 35. f. 7, 8.; *Freyer*, *N. Beitr.* t. 20. f. 3.

Alps, Germany.

B. M.

5. EREB. STUBENDORFFII.

Erebia Stubendorffii *Ménétries* in *Bull. Acad. Petersb.* v. p. 262.

Siberia.

6. EREB. MELAMPUS.

Papilio Melampus *Fuessly*, *Verz. Schw. Ins.* p. 31. n. 604. t. 1. f. 6. (but not of Newman); *Esper*, *Schmett.* i. t. 31. *Suppl.* 7. f. 2., t. 103. *Cont.* 58. f. 1.; *Ochsenh. Schm.* v. *Eur.* i. p. 260. n. 43., *Godart*, *Enc. M.* ix. p. 536. n. 155., *Lép. France*, ii. t. 16. f. 5, 6.; *Boisduval*, *Ind. Meth.* p. 26. n. 198., *Icon. Hist.* t. 35. f. 5, 6.

Pap. Ianthe *Hübner*, *Schm. Eur. Pap.* f. 624, 625.

Pap. Eriphile *Freyer*, *N. Beitr.* pl. 187. f. 3, 4.

Pap. Alcyone? *Borkh.* *Eur. Schm.* i. p. 96. 244. n. 35. c. f. 5, 6.

Alps, Sweden, Germany.

B. M.

7. EREB. MNESTRA.

Papilio Mnestra *Esper*, *Schmett.* i. t. 120. *Cont.* 75. f. 5, 6.; *Hübner*, *Eur. Schm. Pap.* f. 540—543., *Suppl.* f. 96. (*H. Sch.*); *Ochsenheimer*, *Sch. v. Eur.* i. p. 264. n. 45.; *Godart*, *Enc. M.* ix. p. 533. n. 149.; *Duponch. Lép. Fr. Suppl.* i. t. 34. f. 3—4.; *Boisduval*, *Ind. Meth.* p. 26. n. 199., *Icon. Hist.* t. 35. f. 1—4.; *Freyer*, *N. Beitr.* t. 19. f. 3. and 91. f. 3.; *Wood*, *Ind. Ent.* t. 53. f. 15.

Alps of Savoy and Switzerland, Germany.

B. M.

8. EREB. PYRRHA.

Papilio Pyrrha *Wien. Verz.* p. 167.; *Fabricius*, *Ent. Syst.* iii. pt. 1. t. 237. n. 741.; *Hübner*, *Schm. Eur. Pap.* fig. 235, 236. 616.; *Ochsenh. Schm.* v. *Eur.* i. p. 267. n. 46.; *Freyer*, *N. Beitr.* t. 31. f. 3, 4. and t. 91. f. 4.; *Godart*, *Lép. France*, ii. t. 15. fig. 3, 4.

Satyrus Machabæus *Herbst*, *Schm.* t. 209. f. 5, 6.; *Godart*, *Enc. M.* ix. p. 535. n. 153.

Var. *P. Cæcilia* *Hübner*, *Schm. Eur. Pap.* f. 213, 214.

Var. *P. Manto* *Esp. Schm.* i. t. 70. *Cont.* 20. f. 2, 3.

Var. *P. Bubastis* *Meisner*, *Freyer*, *N. Beitr.* t. 38. f. 1.

Papilio Morio *Giorna*, *Cal. Ent.* p. 102.

Papilio Petrosus *De Prunner*, *Lep. Ped.* p. 71.

Papilio Maresius *Esper*, *Schm.* t. 113. *Cont.* 68. f. 4, 5.

Alps, Pyrenees, Germany.

B. M.

9. EREB. CEME.

Papilio Ceme *Esper, Schm. i. t. 120. Cont. 75. f. 2. and 121. Cont. 76. f. 2.*; *Hübner, Schm. Eur. Pap. f. 530—533.*; *Ochsenheim, Schm. v. Eur. i. p. 270. n. 47.*; *Godart, Enc. M. ix. p. 537. n. 158.*; *Duponch. Léop. Fr. Suppl. i. t. 34. f. 5—8.*; *Boisd. Icon. Hist. t. 34. f. 5—8.*, *Ind. Meth. p. 27. n. 201.*; *Freyer, N. Beitr. pl. 31. f. 1, 2.*

B. M.

Alps, Germany.

10. EREB. CETO.

Papilio Ceto *Hübner, Schm. Eur. Pap. f. 578, 579. 1002, 1003.*; *Ochsenheim, Schm. v. Eur. i. p. 272. n. 49.*; *Godart, Léop. France, ii. t. 16. f. 1, 2.*; *Freyer, N. Beitr. pl. 37. f. 1, 2, 3.*

P. Phorcys *Freyer, N. Beitr. pl. 193. f. 2.*

Alps, Helvetia, Switzerland, Sweden.

B. M.

11. EREB. PSODEA.

Papilio Psodea *Ochsenh. Schm. v. Eur. i. p. 271. n. 48.*; *Hübner, Schm. Eur. Pap. f. 497—499.*, *Suppl. f. 165—167. (H. Sch.)*; *Godart, Enc. M. ix. p. 537.*; *God. Duponch. Léop. Fr. Suppl. i. t. 40. f. 1, 2.*; *Boisduv. Icon. Hist. t. 34. f. 3, 4.*; *Freyer, N. Beitr. t. 121. f. 3.*

Var. P. Eumenis *Dahl*; *Freyer, N. Beitr. t. 85. f. 3, 4.*

Styria, Hungary, South of Russia, Sweden, Germany.

B. M.

12. EREB. MEDUSA.

Papilio Medusa *Wien. Verz. p. 167.*; *Fabricius, Ent. Syst. iii. pt. 1. p. 235. n. 734.*; *Hübner, Schm. Eur. f. 103, 104.*, *Suppl. f. 170. larvæ, Nymph. F. d. f. 1 a.*; *Ochsenheim, Schm. v. Eur. i. p. 273. n. 50.*; *Godart, Enc. M. ix. 538. n. 161.*, *Léop. France, ii. t. 15. f. 5, 6.*; *Freyer, N. Beitr. pl. 43. f. 1.*

Papilio Ligea *Esper, Schm. i. t. 7. f. 2.*

Mamola Medea *Schrank, Faun. B. 2. p. 173.*

Var. Pap. Hippomedusa *Boisd. Ind. Meth. p. 27. n. 204. v.*

Germany, East of France, Lapland.

B. M.

13. EREB. PYRENE.

Papilio Pyrene *Esper, Schm. i. t. 116. Cont. 71. f. 3.*; *Hübner, Schm. Eur. Pap. f. 223, 224. (male), Suppl. f. 90, 91. (female).*; *Freyer, N. Beitr. t. 43. f. 2.*

P. Stygne *Ochsenh. Schm. v. Eur. i. p. 276. n. 52.*; *Godart, Enc. M. ix. p. 534. n. 150.*, *Léop. France, ii. t. 14. f. 1, 2.*; *Boisduval, Ind. Meth. p. 27. n. 205.*

Alps, Tyrol.

B. M.

14. EREB. SCANDA.

Erebia Scanda *Kollar in Hugel's Reise n. Kaschmir, p. 452. pl. 17. f. 3, 4.*

Himalaya.

15. EREB. EVIAS.

Satyrus Evias *Duponch. Léop. Fr. Suppl. i. t. 37. f. 1, 2.*; *Boisduv. Icon. Hist. t. 31. f. 3. 5.*

Papilio Bonellii *Hübner, Eur. Schm. Pap. f. 892—895.*; *Freyer, N. Beitr. t. 73. f. 1, 2.*

Alps, Germany, Pyrenees.

B. M.

16. EREB. EPISTYGNE.

Erebia Epistygne *Boisduv. Icon. Hist. t. 31. f. 1—2.*; *Treitschke, Schm. v. Eur. Cont. x. 45.*; *Duponchel, Léop. Fr. Suppl. i. pl. 37. f. 3. 6.*; *Freyer, N. Beitr. pl. 49. f. 1.*; *Hübner, Eur. Schm. Pap. f. 855—858.*

Papilio Stygne *Hübner, Eur. Schm. f. 639, 640.*; *Freyer, South East of France, Germany.*

B. M.

17. EREB. LEFEBVREI.

Erebia Lefebvrei *Boisduval, Icon. Hist. pl. 33. f. 1, 2.*; *Duponchel, Léop. Fr. Suppl. i. pl. 35. f. 3, 4. and 39. f. 5, 6.*; *H. Schaffer, Suppl. Hüb. f. 88, 89. (male) 280, 281. (female) 282. ? 375. (male).*

Satyrus Alecto *Godart, Pap. France, pl. 14. f. 5, 6.*

Pyrenees.

18. EREB. NERINE.

Satyrus Nerine *Treitschke, Boisduval, Ind. M. p. 27. n. 211.*; *Duponchel, Léop. Fr. Suppl. pl. 35. f. 5, 6.*; *Freyer, Beitrage, pl. 13. f. 3, 4.*; *H. Schaffer, Suppl. to Hübner, Schm. Eur. Pap. f. 69—74.*

Var. Satyrus Styx *Escher, Boisduval, l. c.*

Carinthia, Switzerland.

19. EREB. AFRA.

Papilio Afra *Fabricius, Ent. Syst. iii. pt. 1. p. 236. n. 738.*; *Godart, Enc. M. ix. p. 530. n. 144.*; *God.-Duponch. Léop. France, Suppl. i. pl. 35. f. 1, 2.*; *Boisd. Icon. Hist. t. 34. f. 1, 2.*

Papilio Afer *Esper, Schmett, i. 83. Cont. 33. f. 4, 5.*; *Ochsenh. Schm. v. Eur. i. p. 275.*; *Freyer, N. Beitr. t. 37. f. 4.*

Papilio Phegea *Hübner, Eur. Schm. f. 500, 501., 749—751.*

Var. Satyrus Dalmata *Godart, Enc. M. ix. p. 530. n. 143.*

Caucasus, Dalmatia, Germany.

B. M.

20. EREB. MELAS.

Papilio melas *Herbst, Schmett. t. 210. f. 4—7.*; *Ochsenh. Schm. v. Eur. i. p. 277.*; *H. Schaffer, Suppl. Hübner, Schm. Eur. Pap. f. 65, 66. (f.) 67, 68. (m.) 467, 468. (f. var.)*; *Boisduval, Icon. Hist. t. 33. f. 3, 4.*; *Freyer, N. Beitr. t. 49. f. 2.*, *t. 61. f. 1, 2.*; *Godart, Enc. M. ix. p. 534. n. 151.*; *God.-Duponch. Léop. France, ii. t. 14. f. 3, 4. (nec pl. 17. f. 1, 2.)*, *Suppl. i. pl. 39. f. 1—4.*

Pap. Maurus *Esper, Schmett. i. t. 107. Cont. 62. f. 3, 4.*, *t. 110. Cont. 65. f. 4.*

Pap. Nelo *Hübner, Eur. Schm. f. 105, 106.*

Alps, Hungary, Germany.

B. M.

21. EREB. PARMENIO.

Papilio Parmenio *Boeber, Mém. Soc. Imp. Nat. Mosc. ii. p. 306. t. xix.*; *Fischer, Ent. Russ. i. p. 54.*, *Lep. t. 1. f. 1.*; *H. Schaffer, Suppl. Hübner, Schm. Eur. Pap. f. 421, 422. 464—466.*

Satyrus Styrus *Godart, Enc. M. ix. p. 530. n. 142.*

Russia, Styria.

22. EREB. SCIPIO.

Satyrus Scipio *Boisduval, Icon. Hist. t. 30. f. 1—6.*; *Duponchel, Pap. Fr. Suppl. pl. 38. f. 5, 6.*; *Hübner, Eur. Schm. Pap. f. 980—983.*

Pap. Alecto? *Hübner, Eur. Schm. Pap. f. 515, 516.*

Alps.

23. EREB. ALECTO.

Papilio Alecto *Hübner, Schm. Eur. Pap. f. 528, 529.*, *Suppl. p. 173, 174.*; *Ochsenheimer, Schm. v. Eur. i. p. 279.*; *Boisduval, Icon. Hist. t. 32. f. 4—7.*; *Freyer, N. Beitr. pl. 49. f. 3, 4.*; *Duponch. Léop. Fr. Suppl. pl. 38. f. 1, 2.*

Papilio atratus *Esper, Schm. v. Eur. i. 104. Cont. p. 59. f. 1.*

Var. Papilio glacialis *Esper, op. cit. t. 116. Cont. 71. f. 2.*

Var. Papilio Tisiphone *Esper, op. cit. t. 122. Cont. 77. f. 1.*

Var. Papilio Pluto *Esper, op. cit. t. 121. Cont. 76. f. 1.*

Alps, Germany.

B. M.

24. EREB. ARACHNE.

Papilio Arachne *Fabricius, Ent. Syst. iii. pt. 1. p. 237. n. 140.*; *Hübner, Europ. Schmett. Pap. f. 215—217.*; *Boisduval, Ind. Meth. n. 215.*; *Godart, Enc. M. ix. p. 529. n. 140.*, *Léop. France, ii. t. 16. f. 7, 8.*

P. Pronoe *Esper, Schmett. t. 54. Cont. 4. f. 1.*; *Ochsenh. Schm. v. Eur. i. p. 290. n. 59.*; *Freyer, N. Beitr. t. 73. f. 3, 4.*; *Hübner-Geyer, Eur. Schm. Pap. f. 1000, 1001.*

P. Persephone *Esper, t. 121. Cont. 76. f. 4—6.*

Fem. var. P. Styx *Freyer, N. Beitr. pl. 121. f. 1, 2.*

Var. Pap. Pitho *Hübner, Eur. Schm. Pap. t. 574—577.*; *Freyer in Ent. Zeit. Stett. 1847, p. 92.*

Germany, Alps, Pyrenees.

B. M.

25. EREB. BLANDINA.

Papilio Blandina *Fabricius, Mantissa, ii. p. 41.*, *Ent. Syst. iii. pt. 1. p. 236. n. 736.*; *Donovan, Brit. Ins. t. 426.*; *Godart, Léop. France, i. t. 7***. f. 3. t. 7**** f. 3.*; *Boisd. Ind. Meth. n. 216.*; *Stephens, Ill. Haust. i. 62.*; *Westw. & Humphr. Brit. Butt. t. 23. f. 5—10.*

P. Ethiops *Herbst, Schm. t. 209. f. 3, 4. (m.)*, *ib. f. 1, 2. (fem.)*; *Esper, Schm. t. 25.*, *Suppl. i. f. 3.*, *t. 63. Cont. 13. f. 1.*; *Godart, Enc. M. ix. p. 531. n. 146.*

P. Medea *Wien. Verz. 167. (but not of Fabricius)*; *Hübner*

Eur. Schm. Pap. f. 220—222. ; Ochsenh. Schm. v. Eur. i. p. 281., iv. p. 23.

Sat. Neoridas *Freyer, N. Beitr. i. p. 110. tab. 55. f. 3, 4. but not of Boisduval.*

P. Medusa *Borkhaus. Europ. Schm. i. 75. 235.*

(Fem.) P. Alcyone *Stewart's Elem. 2d ed. ii. p. 132. England, Germany. B. M.*

26. EREB. NEORIDAS.

Satyrus Neoridas *Boisduval, Icon. Hist. t. 29. f. 1—4., Ind. Meth. n. 217. ; Treitschke, Schm. v. Eur. x. p. 51. ; Duponchel, Suppl. i. t. 36. f. 5, 6. ; Hübner-Geyer, Europ. Schm. Pap. f. 984—987. ; Freyer, Beitr. i. p. 110. t. 55. f. 3, 4.*

Germany, France.

B. M.

27. EREB. LIGEA.

Papilio Ligea *Linnaeus, Syst. Nat. i. p. 467. (1758), ii. p. 774. n. 144. (12th ed.) ; Fabricius, Ent. Syst. iii. pt. 1. p. 234. n. 732. ; Hübner, Schm. Europ. Pap. f. 225—227. larvæ, Nymph F.—d. fig. 2 a. ; Ochsenh. Schm. v. Europ. i. p. 283. n. 56. ; Godart, Enc. M. ix. p. 532. n. 147., Léop. France, t. 13. f. 1, 2. ; Boisduval, Ind. Meth. p. 28. n. 218. ; Freyer, N. Beitr. pl. 67. ; Stephens, Ill. Haust. i. t. 6. f. 1—3. ; Westw. & Humph. Brit. B. pl. 23. f. 1—4.*

P. Alexis *Linn. Faun. S. n. 787. ; De Geer, Ins. ii. p. 210. tab. 2. f. 7, 8.*

Lapland, Alps, Germany, England.

B. M.

28. EREB. EURYALE.

Papilio Euryale *Esper, Schmett. i. t. 98. Cont. 73. f. 2, 3. 116. 4. ; Hübner, Europ. Schm. Pap. f. 218, 219. 789, 790. 908. 909., Suppl. 97—100. ; Ochsenh. Schm. v. Eur. i. p. 286. ; Godart, Enc. M. ix. p. 533. n. 148. ; Léop. de France, ii. t. 13. f. 3, 4. ; Boisduval, Ind. Meth. n. 219. ; Freyer, N. Beitr. pl. 61. f. 3, 4. ; Standfuss in Ent. Zeit. Stettin, 1848, p. 46.*

Var. Pap. Philomela *Hübner, Schm. Eur. Pap. f. 218, 219.*

Var. Pap. Adyte *Hübner, Schm. Europ. Pap. f. 759.*

Alps, Germany, Silesia.

B. M.

29. EREB. SEDAKOVII.

Hipparchia Sedakovii *Eversmann in Bull. Soc. Imp. Nat. Mosc. 1847, p. 70. tab. 1. f. 5, 6.*

Hipp. Stygne *Fischer, Entom. Russ. i. p. 56., Léop. tab. 1. f. 2. (but not of Ochsenheimer).*

Dauria.

30. EREB. EMBLA.

Papilio Embla *Thunberg, Diss. Acad. Ins. Su. 2. 38., iii. p. 52. tab. 5. f. 8, 8. ; Quensel, Act. Reg. Suec. 1791, t. 9. f. 1, 2. ; Boisduval, Ind. Meth. p. 28. n. 220. ; Zetterstedt, Ins. Lap. p. 904. n. 12. ; H. Schäffer, Suppl. Hübner, Sch. Eur. f. 382, 383., Freyer, N. Beitr. pl. 416. f. 3, 4.*

Papilio Ethus *Fabricius, Ent. Syst. iii. pt. 1. p. 217. n. 680.*

Papilio Dioxippe *Hübner, Eur. Schmett. Pap. f. 538, 539. (male) ; Duponch. Pap. Fr. Suppl. pl. 36. f. 1, 2.*

Papilio Sophia *Acerbi, Voy. au Cap N. pl. 16. n. 1, 2. Lapland.*

31. EREB. DISA.

Pap. Disa *Thunberg, Diss. Acad. Ins. Su. 2. p. 37. ; Boisduval, Ind. Meth. p. 28. n. 221. ; Freyer, N. Beitr. pl. 416. f. 1, 2. ; Zetterstedt, Ins. Lapp. 907. n. 13.*

Pap. Gesion (fem.) *Quensel in Act. Acad. Reg. Suec. 1791, p. 19. f. 3, 4. ; Schneider, Ent. Mag. i. p. 412.*

Pap. Griela *Fabricius, Ent. Syst. iii. pt. 1. p. 236. n. 737. ; Hübner, Eur. Schm. Pap. f. 228, 229. (male) ; Godart, Enc. M. ix. p. 531. n. 145.*

Pap. Embla var. *Ochsenh. Schm. v. Europ. i. p. 287. n. 58. ; Boisduval, Icon. Hist. t. 53. f. 1—3. ; Godart-Duponchel, Suppl. i. t. 36. f. 3, 4.*

Var. Pap. Stheno *Hübner, Schm. Eur. Pap. f. 561, 562. (fem.).*

Lapland, Dalecarlia.

B. M.

32. EREB. GOANTE.

Papilio Goante *Esper, Schm. i. t. 116. Cont. 71. f. 1. ; May 1. 1851.*

Ochsenh. Schm. v. Eur. i. p. 293. n. 60. ; Godart, Enc. M. ix. p. 530. n. 141., Léop. de France, ii. t. 17. f. 3. 4. ; Boisduval, Ind. M. n. 222. ; Freyer, N. Beitr. pl. 79. f. 1, 2.

Papilio Scæa *Hübner, Eur. Schm. Pap. f. 233, 234., Suppl. 77—79. 171, 172.*

Alps, Germany, Saxony.

B. M.

33. EREB. GORGE.

Papilio Gorge *Esper, Schm. t. 119. Cont. 74. f. 4, 5. ; Hübner, Europ. Schm. Pap. f. 502—505., Suppl. f. 175. var. ; Ochsenh. Schm. v. Europ. i. p. 294. n. 61 a. ; Godart, Enc. M. ix. p. 527. n. 136., Léop. de France, ii. t. 17. f. 1, 2. (nec 14. f. 3, 4.) ; Boisduval, Ind. Meth. n. 224. ; Freyer, N. Beitr. pl. 79. f. 3.*

Var. P. Erynys *Esper, op. cit. t. 121. Cont. 76. f. 3.*

Alps, Germany, Tyrol.

B. M.

34. EREB. GORGONE.

E. Gorgone *Boisduval, Icon. Hist. t. 29. f. 5—8., Ind. Meth. n. 224. ; Herr.-Schäff. Suppl. Hübner, Eur. Sch. f. 75, 76. (male) 283, 284. (fem.) 469, 470. (fem. var.) Hipp. Gorge var. Treitschke, Schm. v. Eur. Suppl. x. 1. 231.*

Pyrenees, Germany.

B. M.

35. EREB. MANTO.

Papilio Manto *Wien. Verz. p. 169. ; Fabricius, Ent. Syst. iii. pt. 1. p. 231. n. 722. ; Ochsenheim. Sch. v. Eur. i. p. 296. n. 62. ; Hübner, Eur. Schm. Pap. f. 107, 108. 512—514. ; Godart, Léop. Fr. ii. pl. 17. f. 7, 8. ; Freyer, N. Beitr. pl. 85. f. 1, 2.*

Papilio Erena *Fabricius, Ent. Syst. iii. pt. 1. p. 237. n. 739.*

Papilio Gesion (male) *Quensel, Act. Reg. Suec. 1791, p. 272. pl. 9. f. 5, 6.*

Papilio Lappona *Thunberg, Diss. Acad. Ins. Su. ii. p. 37. tab. 5. f. 6. 6. ; Esper, Schm. i. t. 108. Cont. 63. f. 3.*

Pap. Castor *Esper, Schm. i. t. 67. Cont. 17. f. 1.*

Pap. Pollux *Esper, Schm. i. t. 67. Cont. 17. f. 2.*

Papilio Pandrosus *Herbst, Schm. t. 202. f. 78.*

Papilio Aglauros *Herbst, op. cit. t. 203. f. 1, 2.*

Papilio Zilia *Borkhausen, Eur. Schm. ii. 209.*

Papilio dubius *Fuessly, N. Mag. ii. p. 331.*

Maniola *Baucis Schrank, Faun. Bo. ii. p. 177.*

Alps, Pyrenees, Lapland.

36. EREB. OCNUS.

Hipparchia Ocnus *Eversmann in Bull. Soc. Imp. Nat. Mosc. 1843, p. 538. pl. 8. f. 5. a. b. ; H. Schäffer, Suppl. Hübner, Schm. Eur. Pap. f. 291, 292.*

Ural Mountains.

37. EREB. STHENNYO.

Erebia Sthenno *Graslin, Ann. Soc. Ent. France, 1850 pl. x. f. 1—3.*

Pyrenees.

38. EREB. DROMUS.

Papilio Dromus *Fabricius, Ent. Syst. iii. pt. 1. p. 224. n. 701. ; Godart, Enc. M. ix. p. 528. n. 138.*

Papilio Cleo *Hübner, Schm. Eur. Pap. f. 209—212. ; Godart, Pap. Fr. ii. pl. 17. f. 5, 6.*

Papilio Tyndarus *Esper, Schm. i. t. 67. Cont. 17. f. 1. ; Ochsenheim. Schm. v. Eur. i. p. 299. ; Hübner, Eur. Schm. Pap. f. 971—974. 209—212., Suppl. f. 168, 169. 275. ; Freyer, N. Beitr. pl. 80.*

Var. E. Ottomana *H. Schäffer, Suppl. Hübner, Schm. Eur. Pap. f. 376. 379, 380.*

Var. P. Cassioides *Esper, op. cit. t. 103. Cont. 58. f. 2, 3.*

Papilio Herse *Borkhausen, Eur. Schm. i. p. 94.*

Hipp. Nelus *Freyer, N. Beitr. pl. 80.*

Papilio Tyndarellus *Herbst, Schm. t. 202. f. 5, 6.*

Alps, Pyrenees, Sierra Nevada, Hungary.

39. EREB. MELANCHOLICA.

Erebia melancholica *H. Schäffer, Suppl. Hübner, Schm. Eur. Pap. f. 276—279.*

Europe.

40. EREB. MÆRENS *Westw.*
Erebria tristis *H. Schüff. Suppl. Hübn. Schm. Eur. Pap.*
 f. 387—390. (but not of Guérin).
 Europe.
41. EREB. DISCOIDALIS.
Hipparchia discoidalis *Kirby, Fauna Boreali-Americana*,
 p. 298. pl. 3. f. 2, 3.
 Hudson's Bay.
42. EREB. NEPHELE.
Hipparchia Nephele *Kirby, Fauna Bor.-Americana*, p.
 297.
 Canada.
43. EREB. CLYTUS.
Papilio Clytus *Linnaeus, Syst. Nat.* ii. p. 768. n. 124.;
Fabricius, Ent. Syst. iii. pt. 1. p. 214. n. 671.; *Esper*,
Schm. Pap. tab. 66. Cont. 16. f. 2, 3, 4.; *Wulfen*,
Capens. Ins. p. 31.; *Godart, Enc. M.* ix. p. 525. n.
 132.; *Cramer, Pap.* pl. 86. f. C. D.
Dira Clyte *Hübner, Verz.* n. 573.
Papilio Tisiphone *Fabricius, Gen. Ins. Mant.* p. 263.,
Ent. Syst. iii. pt. 1. p. 243. n. 757.; *Borkhausen, Schm.*
Eur. i. p. 239.; *Engramelle, Pap.* i. pl. 46. f. a. b.
 South Africa. B. M.
44. EREB. CASSUS.
Papilio Cassus *Linnaeus, Syst. Nat.* ii. p. 761. n. 125.;
Cramer, Pap. pl. 314. f. C. D.; *Godart, Enc. M.* ix.
 p. 526. n. 133. (An *Er. Clytus*, fem. ?)
 South Africa. B. M.
45. EREB. CASSIUS.
Satyurus Cassius *Godart, Enc. M.* ix. p. 526. n. 134.; *E.*
Doubleday, List Lep. B. Mus. p. 128.
Papilio Hyperbius *Fabricius, Syst. Ent.* p. 485. n. 188.,
Ent. Syst. iii. pt. 1. p. 215. n. 672. (but not of Lin-
 naeus); *Cramer, Pap.* pl. 168. f. C. D. E. F.
 Cape of Good Hope. B. M.
46. EREB. HIPPIA.
Papilio Hippias *Cramer, Pap.* pl. 222. f. C. D.; *E. Doubl.*
List Lep. B. Mus. p. 128.
Sat. Cassius fem. *Godart, Enc. M.* ix. p. 527. n. 134.
 South Africa. B. M.
47. EREB. HYPERBIUS.
Papilio Hyperbius *Linnaeus, Syst. Nat.* ii. p. 769. n. 130.;
Wulfen, Capens. Ins. p. 32. n. 31. (but not of *Fabricius*
 and *Cramer*).
 Cape of Good Hope.
48. EREB. MINTHA.
Dira Mintha *Hübner, Zutrage*, f. 851, 852.
 An *Er. Clytus* *Linn.* var. ?
 South Africa.
49. EREB. NATALII.
Satyurus Natalii *Boisduval in Delegorgue, Voyage en Afrique*,
 ii. p. 593.
 Amazoulu.
50. EREB. PANDA.
Satyurus Panda *Boisduval in Delegorgue, Voyage en Afrique*,
 ii. p. 594.
 Amazoulu.
51. EREB. TAMATAVÆ.
Satyurus Tamatavæ *Boisd. F. Ent. Madag.* p. 60. pl. 8.
 f. 6, 7.; *E. Doubl. List Lep. Brit. Mus. App.* p. 32.
 Madagascar, Tamatave. B. M.
52. EREB. COCTEI.
Satyurus Coctei *Guérin, Voyage Coquille, Zool.* ii. pt. 2.
 divis. 1. p. 281., and *Mag. de Zool.* 1839, *Ins.* pl. 11.
 Chili.
53. EREB. CHILIENSIS.
Satyurus Chiliensis *Guérin, Voyage Coquille, Zoologie, Ins.*
 p. 280., *Atlas Ins.* n. 16. f. 4, 5.; *E. Doubl. List*
Lep. B. M. p. 127.
 Conception, Chili.
54. EREB. ? TRISTIS.
Satyurus tristis *Guérin, Voy. Coquille, Zoologie*, p. 281.
Argynnis tristis *Guérin, Voyage Coquille, Atlas Ins.* n. 16.
 f. 5.
 Chili.
55. EREB. ROSSII.
Hipparchia Rossii *Curtis in Append. to Ross's Narrative*
N. W. Passage, p. lxvii. pl. A. f. 7. (1835).
 Arctic Regions.
56. EREB. SUBHYALINA.
Hipparchia subhyalina *Curtis in Append. to Ross's Nar.*
N. W. Passage, p. lxviii.
 Arctic Regions.
57. EREB. MELUSINA.
Ereb. Melusina *H. Schüff. Suppl. Hübn. Schm. Eur. Pap.*
 f. 373, 374.
 Europe.
58. EREB. MANCINUS.
Erebria Mancinus *E. Doubleday, MS.; Doubl. Westw. &*
Hewits. Gen. D. Lep. pl. 64. f. 2.
 Rocky Mountains. B. M.
59. EREB. VESAGUS.
Erebria Vesagus *E. Doubleday, MS.; Doubl. Westw. &*
Hewits. Gen. D. Lep. pl. 64. f. 3.
 Rocky Mountains ?

Genus XIX. ARGYROPHENGA.

ARGYROPHENGA *E. Doubleday.*
 EREBIA *Boisduval MS.*

BODY elongate, slender; palpi very long; antennæ short; wings elongated, streaked longitudinally with silver beneath.

HEAD rather small, clothed in front with very long hairs. Eyes naked.

Antennæ not more than two fifths of the length of the fore wings; the terminal fifth portion of its length gradually tapering to a moderately robust compressed club, concave beneath, blunt at the tip.

Labial Palpi very long and rather slender, advanced in front to nearly double the length of the head, divergent; basal joint short; second joint very long, elevated obliquely higher than the level of the top of the eyes, densely clothed in front with very long hairs; third joint not quite so long as, and slenderer than, the second, much less densely clothed with hairs of moderate length.

THORAX rather small, oval, moderately hairy.

Fore Wings elongate-subtriangular. Fore margin but slightly arched; apical angle rather acute. Apical margin entire, convex, about three fifths of the length of the fore margin; anal angle very much rounded. Inner margin longer than the apical, nearly straight. Costal, median, and submedian veins slightly dilated at the base. Costal vein reaching rather beyond the middle of the costa. Postcostal vein with its first branch arising just beyond the anterior extremity of the discoidal cell; second and third branches arising at nearly equal distances apart; fourth branch arising at a shorter distance from the third than the space between the second and third; the terminal part of the vein rather deflexed beyond the fourth branch. Upper disco-cellular vein obliterated; the upper discoidal vein arising at the extreme tip of the discoidal cell: middle disco-cellular vein arising before the middle of the length of the wing, directed towards the base of the wing, very strongly angulated beyond its middle, its terminal portion being directed outwards; a minute spur being emitted into the discoidal cell at the angle: lower disco-cellular vein about as long as the middle one, nearly continuous with the outer portion of the latter, oblique, closing the discoidal cell in a rather acute point at a little distance before the middle of the wing; uniting with the third branch of the median vein at about the same distance from its base as exists between the bases of its first and second branches; the third branch being obtusely angulated at the place of junction.

Hind Wings nearly regularly obovate, entire; outer and anal angles much rounded. Costal margin considerably arched. Costal vein not extending to the middle of the costa. Precostal short, curved outwards. Postcostal arising nearer the body than the precostal, branching at a moderate distance from its base, the branch extending to about three fourths of the costal margin; terminal part of the postcostal vein extending to the place of the outer angle. Upper disco-cellular vein arising at a very short distance beyond the branch, equal in length to the space between the base of the postcostal vein and its branch; rather angulated near its base, and throwing off a very short spur into the discoidal cell, directed towards the base of the wing: lower disco-cellular vein very short, more transversely oblique, closing the discoidal cell in a rather acute point, by joining with the third branch of the median vein at about the same distance from its base as exists between the first and second branches, the third branch being obtusely angulated at the place of junction; the discoidal cell does not reach the middle of the wing. The spaces between the veins are longitudinally streaked with silver.

Fore Legs of the male extremely minute, clothed with very long hairs. Tarsus exarticulate, equal in length to the femur, very acute at the tip.

Four Hind Legs rather short. Femur hairy within. Tibia armed beneath with rows of very fine and rather long spines; tibial spurs rather long. Tarsus moderately spined beneath. Ungues long, irregularly curved, entire. Paronychia very deeply bifid; inner division nearly as long as the outer and broader.

ABDOMEN very long and slender.

This genus is closely allied to *Erebia* in its general appearance, colouring, and ocellation, but is distinguished, not only by its short antennæ, long body, and rather elongated wings, but especially by its long palpi, which, with its short antennæ, give it some resemblance to *Libythea*, from which it is, however, at once separated by its entire subovate wings. The silver streaks on the under surface of the hind wings, running longitudinally between the veins, distinguish it from all the rest of the Satyridæ, giving it a distant resemblance to some of the fritillary butterflies. The only known species is a native of New Zealand, where it was discovered by P. Earl, Esq., frequenting a plain in the southern island. According to the observations of Mr. Earl upon its habits, they seem much to resemble those of the subalpine species of *Erebia*.

ARGYROPHENGA.

1. ARGYR. ANTIPODUM *E. Doubleday* in *Ann. Nat. Hist.* xvi. p. 307. ; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 63. f. 3.
New Zealand. B. M.

Genus XX. CHIONOBAS.

CHIONOBAS *Boisduval, Duponchel, E. Doubl., H. Schüff.*
SATYRUS *p. Godt., Latreille.*
HIPPARCHIA *p. Ochsenheimer.*
EREBIA *p. Dalman.*

BODY very hairy; wings but moderately clothed with scales, of a dull brownish buff, or dirty fulvous colour; the hind wings beneath much freckled.

HEAD very small, and very hairy.

Eyes prominent, naked.

Antennæ short, slender, gradually thickened from the middle into a long but not thick club, obtuse at the tip, concave, finely carinated beneath.

Labial Palpi densely hairy in front, porrected obliquely, scarcely reaching to the level of the top of the eyes, but porrected to the length of the head; terminal joint small, slender-oval, hairy.

THORAX very hairy.

Fore Wings elongate-triangular. The fore margin scarcely arched; the apex rounded. Apical margin convex, entire, about two thirds of the length of the costal. Inner margin straight, not quite so long as the apical. Veins arranged as in *Erebia*, except that, in consequence of the greater length and narrowness of the wing, the discoidal cell is narrowed and elongated to some distance beyond the middle; the middle and outer disco-cellular veins (the upper one being obsolete) forming a nearly continuous, oblique, slightly curved line.

Hind Wings also elongated, so that they extend considerably beyond the inner angle of the fore wings. The costal margin nearly straight. The outer margin rounded, entire, or but slightly scalloped. Anal margin entire. Veins arranged as in *Erebia*, except that the discoidal cell is elongated and narrow, extending considerably beyond the middle of the wing. The upper disco-cellular vein is also much elongated, and the lower one as long as the space between the base of the third branch of the median vein and the point of its junction with the outer disco-cellular.

Fore Legs of the male very small and slender, densely clothed to the tip with long loose hairs. The femur about as long as the tibia, and the tarsus as the tibia.

Four Hind Legs short. Femur rather thick, very hairy beneath. Tibia clothed all over with long loose hairs; tibial spurs long and acute. Tarsi armed beneath and at the sides with rows of spines. Ungues curved, long, simple, and very acute. Paronychial and pulvillus small.

ABDOMEN small, slender, hairy.

This is a group of dull-looking butterflies, which are at once distinguished from the rest of the present family, partly by the more elongate form of the wings, the shorter inner margin of the anterior, which occasions a deeper incision between their posterior angle and the outer angle of the hind wings, partly by the wings being less densely clothed with scales than ordinary, and partly by the pale, livid, or obscure colours of the wings, and the hind ones marked with paler veins beneath. The latter characters, as Boisduval fancifully remarks, "semblent annoncer qu'ils sont nés là où la nature expire;" and, in fact, with the exception of *Ch. Aello* (which is found flying over the glaciers of the Alps of Tyrol and Suabia), the species of this genus inhabit the inhospitable climes of Lapland, Kamtschatka, the north of Siberia, Greenland, Iceland, and Labrador; and hence the generic name given to them by Boisduval, which means frequenters of the snow. No species has hitherto been brought from the Antarctic regions, although, as Boisduval suggests, some may occur in the southern Alpine regions of South America, in consequence of the similarity which exists between some of the insects of that country and of Northern Europe.

One of the most peculiar characters which I have observed in the group consists in the very hairy condition of the four hind legs; the tibia being thickly clothed with long hairs, as well as the under side of the thighs. In the veins of the wings, the chief peculiarity exists in the greater elongation of the discoidal cell of all the wings, and of the upper disco-cellular vein of the hind wings.

The species form two groups; those with the wings ornamented with ocelli, such as *Ch. Norma*, *Aello*, *Balder*, *Jutta*, and *Tarpeia*; and those without, including *Ch. Bootes*, *Bore*, *Ceno*, and *Also*.

CHIONOBAS.

1. CHION. AELLO.

Papilio Aello Esper, *Schm.* i. t. 115. *Cont.* 70. f. 1.; *Hübner*, *Europ. Schm. Pap.* f. 141, 142. 519—521., *Suppl.* 125, 126.; *Ochsenheim*, *Schm. v. Europ.* i. p. 199. n. 16.; *Godart*, *Enc. M.* ix. p. 518. n. 15.; *Boisduval*, *Icon. Hist.* t. 36. f. 1—3.; *Duponchel*, *Pap. Fr. Suppl.* i. pl. 31. f. 1—3.

Papilio Norna Hübner, *Schm. Eur. Pap.* f. 141. Alps, Tyrol, Savoy.

B. M.

2. CHION. NORMA.

Papilio Norna Thunberg, *Diss. Acad. Ins. Su.* ii. p. 36. t. 5. f. 11.; *Esper*, *Schm.* i. t. 108. *Cont.* 63. f. 4.; *Ochsenheim*, *Schm. v. Europ.* i. p. 201. n. 17.; *Godart*, *Enc. M.* ix. p. 518. n. 116.; *Hübner*, *Eur. Schm. Pap.* f. 142*. 614, 615. 763—766.; *Boisduval*, *Icon. Hist.* t. 36. f. 4—6.; *Zetterstedt*, *Ins. Lapp.* p. 901. n. 4.; *Duponchel*, *Pap. Fr. Suppl.* i. pl. 31. f. 4, 5.

Var. *Papilio Celæno* Hübner, *Europ. Schm. Pap.* f. 152, 153.

Var. *Papilio Hilda* Schneider, *Mag.* iv. t. 414. n. 3.; *Quensel*, *Act. Holm.* 1791, p. 272. t. 9. f. 7, 8.

Lapland, Norway.

B. M.

3. CHION. TARPEIA.

Papilio Tarpeia Fabricius, *Mant. Ins.* ii. p. 32. n. 338., *Ent. Syst.* iii. pt. 1. p. 214. n. 669.; *Esper*, *Schm.* i. t. 83. *Cont.* 33. f. 1, 2.; *Duponchel*, *Pap. Fr. Suppl.* i. pl. 31. f. 6, 7.; *Freyer*, *N. Beitr.* pl. 427. f. 3, 4.; *Godart*, *Enc. M.* ix. p. 519. n. 118.; *Boisduval*, *Ind. Meth.* p. 29. n. 229.; *Ochsenheim*, *Schm. v. Eur.* i. p. 203.

n. 18.; *Hübner*, *Schm. Eur. Pap.* f. 779—782., *Suppl.* f. 61—64.

Pap. Celimene Cramer, *Pap.* t. 375. f. D. E. Siberia, Eastern Russia.

4. CHION. URDA.

Hipparchia Urda Eversmann in *Bull. Soc. Imp. Nat. Mosc.* 1847, iii. p. 69. tab. 2. f. 1—4.; *H. Schaffer*, *Suppl. Hübner. Schm. Eur. Pap.* pl. 97. f. 461—463. Dauria.

5. CHION. JUTTA.

Pap. Jutta Hübner, *Schm. Eur. Pap. Suppl.* f. 116. 118.; *Boisduval*, *Icon. Hist.* p. 19. 187. 3. tab. 38. f. 1, 2. (m.) 3, 4. (f.); *Duponchel*, *Pap. Fr. Suppl.* i. pl. 40. f. 3, 4.; *Zetterstedt*, *Ins. Lapp.* p. 902. n. 5.

Papilio Norna var. *Ochsenheim*, i. p. 202. Lapland, Norway.

6. CHION. BALDER.

Satyrus Balder Boisduval, *Icon. Hist.* t. 39. f. 1—3.; *Boisduval et Leconte*, *Icon. Lep. Am. Sept.* p. 216.; *Duponchel*, *Lép. France*, *Suppl.* t. 49. f. 4, 5.; *Guérin-Ménéville*, *Icon. R. An. Ins.* t. 80. f. 1.; *Zetterstedt*, *Ins. Lapp.* p. 902. n. 6.; *Hübner*, *Zutr. ex. Sch.* f. 981, 982.; *H. Schaffer*, *Suppl. Hübner. Eur. Schm. Pap.* f. 384, 385, 386.

(Fem.) *Pap. Jutta* Hübner, *Eur. Schm. Pap.* f. 614, 615. Polar Regions, Hudson's Bay, Lapland.

B. M.

7. CHION. BOOTES.

Satyrus Bootes Boisduval, *Icon. Hist.* t. 37. f. 4, 5, 6.;

Sp. Gen. Ins. Lep. pl. 13. f. 3.; *Duponchel, Lép. Fr. Suppl.* i. pl. 32. f. 3, 4, 5.; *Hübner, Schm. Eur. Pap.* f. 1025—1028., *Suppl. H. Schüff.* f. 391, 392. (fem.)
Polar Regions, Lapland. B. M.

8. CHION. BORE.

Papilio Bore Hübner, Europ. Schm. Pap. f. 134—136. 756.; *Esper, Schm. t.* 100. *Cont.* 55. f. 1.; *Ochsenh. Schm. v. Europ.* i. p. 205.; *Dalman, Pap. Su.* 80. n. 7. (Erebia B.); *Boisduval, Icon. Hist.* t. 37. f. 1—3.; *Duponchel, Lép. Fr. Suppl.* i. pl. 32. f. 1, 2.

Pap. Fortunatus Fabricius, Ent. Syst. iii. pt. 1. p. 214. n. 670.; *Godart, Enc. M.* ix. p. 519. n. 117.

Pap. Norna var. γ. Thunberg, Diss. Acad. p. 50.; *Quensel, Act. Holm.* 1791, pl. 10. f. 1, 2.; *Schneider, Mag.* iv. p. 415. 4.

Lapland, North Europe, Greenland.

B. M.

9. CHION. ŒNO.

Satyrus Œno Boisduval, Icon. Histor. pl. 39. f. 4—6.; *Hübner, Schm. Europ. Suppl. (H. Schüff.)* f. 59, 60. 123, 124.

North Cape, Iceland, Russian Lapland.

10. CHION. ALSO.

Chionobas Also Boisduval, Icon. Hist. pl. 40. f. 1, 2.; *H. Schüffer, Suppl. Hübner, Schm. Eur. Pap.* f. 381. male.
Northern Siberia.

11. CHION. CRAMBIS.

Hipparchia Crambis Sömmmer. MS.; Freyer, N. Beitr. t. 440. f. 3, 4. (An Ch. Bore var. ?)
Labrador.

12. CHION. TAYGETE.

Œneis Taygete Hübner, Samml. exot. Schm. Band iii. pl. —; *H. Schüff. Suppl. Hübner, Eur. Schm.* f. 112—115.
Labrador.

13. CHION. CHRYXUS.

Chionobas Chryxus E. Doubl. MS.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 64. f. 1.
Rocky Mountains, North America. B. M.

Genus XXI. ARGE.

ARGE *Esper, Hübner, Boisduval, H. Schüffer.*

SATYRUS *p. Godt.*

SATYRES PRATICOLES *Duponchel.*

SATYRES LEUCOMÉLANIENS *Lefebvre.*

BODY elongate, moderately hairy; wings large, slightly scalloped; white, with black markings.

HEAD rather small, moderately hairy.

Eyes prominent, naked.

Labial Palpi rather short, obliquely porrected, scarcely reaching above the level of the middle of the eyes, extending to about two thirds of the length of the head, remotely apart; the first and second joints but slightly clothed with long, erect, hairy bristles; the terminal joint one third of the length of the preceding, scarcely hairy, slender, acute, and naked at the tip.

Antennæ not half the length of the fore wings, slender, with the joints not very distinct; terminated by a long and very gradually formed rather slender club, finely carinated beneath on the inner edge.

THORAX of moderate size, clothed with woolly hairs, especially in front; wings large, rounded, and with the outer margin more or less scalloped.

Fore Wings with the costal margin moderately arched. The apical margin convex, more than two thirds of the length of the costa. Inner margin longer than the apical one. Costal vein moderately swollen at the base. Veins arranged as in *Chionobas*, except that the discoidal cell of the fore wings does not extend quite to the middle of the wing, which is marked towards the costa with a large black patch, traversed by the disco-cellular veins; the upper of which is very short and almost obsolete; the middle and outer one much longer, forming a nearly continuous curved line, varying, however, in its precise direction; the middle one emitting a short spur backwards into the discoidal cell, near its junction with the outer one. The median and submedian veins are not dilated at the base.

Hind Wings large, nearly rounded. Anal margin not incised near its extremity. Costal margin much arched. Costal vein not extending far beyond the middle of the costa. Discoidal cell much shorter than in *Chionobas*. The upper disco-cellular arising at a short distance from the base of the branch of the postcostal vein, and forming the slightly curved base of the discoidal vein; whilst the lower disco-cellular is longer than the upper, and united to the third branch of the median vein much nearer to its origin than the space between the first and second branches of the latter.

Fore Legs in both sexes exceedingly minute, concealed amongst the hairs of the breast; those of the male with the femur oval, compressed. Tibia about as long, broad and compressed, narrowed at the base. Tarsus as long as the tibia, gradually attenuated to the tip, where are several short bristles. *Fore Legs* of the female shorter than those of the male, but rather broader. The tibia shorter than the femur; and the tarsus than the tibia; the tarsus being very short and conical, and apparently exarticulate, with a few bristles at the tip.

Four Hind Legs rather long and slender, scaly. Tibia of the middle legs much shorter than that of the hind ones: tibiae armed beneath with two rows of slender long spines; tibial spurs long and acute. Tarsi very

long, armed with several rows of long sharp spines. Claws long, curved, acute, and entire. Pseudonychia long, slender, bifid. Pulvillus moderately produced.

ABDOMEN long and slender.

CATERPILLAR pubescent, but slightly elongated, marked with longitudinal stripes; body gradually attenuated, and forked at the tip.

CHRYsalis short, rounded, destitute of tubercles, of a pale colour; the head marked with two black spots; not suspended by the tail, but resting on the ground under the grass.

This genus is exclusively composed of those species of Satyridæ which have the ground colour of the wings white, marked with black spots; hence they are termed "Leucomelaniens" and "Semideuils" by the French entomologists, and hence the name of the "Half-mourner" and "Marmoress," applied to our only English species. The species appear to be confined to the warmer portions of Europe, especially frequenting the shores of the Mediterranean; one species only, *A. Galathea*, occurring in our more northern climate, and extending to Sweden. The species are extremely variable in the amount of the black colour disposed over their wings, some specimens of *A. Galathea* being almost entirely black; *A. Clotho*, on the contrary, exhibits the smallest amount of this colour. Hence the determination of the species which are closely allied together is very difficult, which has led M. Alex. Lefebvre to search for some permanent character for their identification, which he considers to exist in the form and arrangement of the veins connecting the postcostal and median veins at the extremity of the discoidal cell, and which he terms the "nervure cellulaire" (our upper, middle, and lower disco-cellular veins), and which he accordingly employed in his paper on this family, in the first volume of the "Annales" of the French Entomological Society. M. Boisduval does not, however, appear to regard it as of so much importance as M. Lefebvre claims for it.

The transformations of *A. Galathea* and its variety *A. leucomelas* have been illustrated by Röseler, Hübner, Freyer, and other authors. The Caterpillar is green, with a brownish red head, a darker dorsal and two paler lateral stripes; its body is terminated by two small red spines. It feeds in May on the *Phleum pratense*. The Pupa is shiny, oval, of a yellowish colour, with two black eyelike spots at the sides of the head.

ARGE.

1. ARGE LACHESIS.

Papilio Lachesis Ochsenheimer, Schmett. v. Europa, i. p. 247. n. 36.; *Hübner, Eur. Schm. Pap.* f. 186—189., *Hb. Beitr.* 2 B. tab. 3. f. P. 1, 2.; *Godart, Enc. M.* ix. p. 507. n. 92.; *Godart, Lép. de France*, ii. t. 19. f. 1, 2.; *Boisduval, Ind. Meth.* p. 25. n. 183.; *Lefebvre, Ann. Soc. Ent.* i. pl. 2. f. 1.

Arge Nemausiaca Esper, Schmett. t. 96. *Cont.* 51. f. 1, 2. Western Europe. B. M.

2. ARGE HYLATA.

Hipparchia Hylata Ménétries; Boisduval, Ind. Meth. p. 25. n. 184.; *H. Schaffer, Suppl. Hüb. Schm. Eur. Pap.* f. 425, 426.

Caucasus.

3. ARGE GALATHEA.

Papilio Galathea Linn. Syst. Nat. i. p. 474. (1758), ii. p. 772. n. 147. (12th ed.); *Fabricius, Ent. Syst.* iii. pt. 1. p. 239. n. 745.; *Lewin, Brit. Butt.* t. 28. f. 1—4.; *Hübner, Europ. Schm. Pap.* 183—185. larvæ, Nymph, F. b. fig. 2. a. b.; *Ochsenheimer, Schmett. v. Eur.* i. p. 242. n. 35.; *Godart, Enc. M.* ix. p. 505. n. 91.; *Godart, Lép. de France*, i. t. 8. f. 2.; *Stephens, Ill. Haust.* i. p. 57.; *Lefebvre, Ann. Soc. Ent.* i. pl. 2. f. 2.

Maniola Galathea Schrank, Faun. B. ii. p. 170.

Var. *Papilio Procida Herbst, Schmett. t.* 183. f. 5, 6.; *Hübner*, p. 658, 659.; *Freyer, Neue Beitr.* f. 379.; *Boisduval, Icon. Hist.* t. 25. f. 5, 6.

Papilio Galaxera Esper, Schm. cxi. Cont. 66. f. 4, 5.

Var. *Arge Leucothoe Steph. MS. Marshall, Zool.* p. 471.

Var. *Papilio Galene Ochsenh. Schm. v. Eur.* i. p. 256.; *Esper, Schm. t.* 124. *Cont.* 79. f. 1, 2.

Var. *Papilio Liriope Cyrilli, Ent. Neap. Specimen*, i. t. 12. f. 8.

Var. *Papilio leucomelas Hübner, Europ. Schm.* f. 517, 518.; *Esper, Schm. i. t.* 81. *Cont.* 31. f. 1, 2.; *Boisd. Ic. Hist.* t. 25. f. 3, 4.; *Freyer, N. Beitr.* t. 433.

Europe, England.

B. M.

4. ARGE CLOTHO.

Papilio Clotho Ochsenh. Schm. v. Europa, i. p. 248. n. 37.; *Hübner, Europ. Schm. Pap.* f. 190, 191.; *Boisduval, Icon. Hist.* t. 25. f. 1, 2.; *Ind. Meth.* p. 25. n. 186.; *Duponchel, Lép. de France, Suppl.* t. 25. f. 1. 4.; *Westw. & Hewitts, Gen. D. Lep.* pl. 64. fig. 5.; *Lefebvre, Ann. Soc. Ent.* i. pl. 2. f. 4.; *Lucas, Expl. Alg. Lep.* pl. 1. f. 4.

Papilio Arge Fab. Ent. Syst. iii. pt. 1. p. 239. n. 746. ?; *Godart, Enc. M.* ix. p. 507. n. 93.

Arge Russiæ Esper, Schm. i. t. 84. *Cont.* 34. f. 1, 2.

Pap. Japygia Cyrilli, Ent. Neap. i. t. 3. f. 5.; *Esper, Schm. t.* 105. *Cont.* 60. f. 3.

Pap. Suwarovius Herbst, Schm. t. 182. f. 5—7.

Pap. Atropos Hübner, Eur. Schm. f. 192, 193.

Pap. Lyssianassa Dahl; Boisd. Ind. M. n. 186. var.

Var. *P. Cleanthe Hübner, Eur. Schm.* f. 975—979.;

Duponchel, Lép. Fr. Suppl. pl. 25. f. 5, 6.; *Boisduval, Icon. Hist.* pl. 26. f. 1—3.

Russia, Hungary, Southern Europe, Sicily, Alps. B. M.

5. ARGE HERTA.

Papilio Herta Dahl; Hübner (Geyer), Eur. Schm. Pap. f. 896—899.; *Boisduval, Ind. M.* p. 25. n. 188., *Icon. Hist.* pl. 28. f. 1—3.; *Lefebvre, Ann. Soc. Ent. France*, i. t. 2. f. 5.

Satyrus Larissa Parreyss; Duponchel, Lép. de France, Suppl. t. 26. f. 1—4.; *Hübner (Geyer), Eur. Schm. Pap.* f. 900—903.; *Freyer, t.* 73. f. 1.; *Boisd. Icon. Hist.* pl. 28. f. 4—6.; *Lefebvre, Ann. Soc. Ent.* i. pl. 2. f. 5.; *Brullé, Exp. Morée, Ins.* t. 45. f. 3. 3 a.

Morea, Dalmatia, Corfu. B. M.

6. ARGE TITEA.

Hipparchia Titea Klug, Symb. Phys. t. 29. f. 15—18.; *Boisduval, Ind. Meth.* p. 26. n. 189.

Satyrus D'Arceti Lefebvre in Ann. Soc. Ent. de France, i. pl. 2. f. 1.; *Duponchel, Lép. de Fr. Suppl.* pl. 26. f. 5, 6.

Syria, Southern Russia.

7. ARGE TENEATES.

Hipparchia Teneates Ménétries; Boisduval, Ind. M. n. 190.; *H. Schaff. Suppl. Hüb. Schm. Eur. Pap.* f. 423, 424.

Caucasus.

8. ARGE PSYCHE.

Papilio Psyche Hübner, Eur. Schm. Pap. f. 198, 199, 676, 677, 694—697.; *Godart, Enc. M.* ix. p. 508. n. 95., *Lép. de France*, ii. t. 19. f. 3, 4.; *Boisduval, Ind. Meth.* p. 26. n. 191.; *Lefebvre, Ann. Soc. Ent.* i. pl. 2. f. 7.

Papilio Syllius Herbst, Pap. t. 182. f. 89.; *Ochsenh. Sch. v. Eur.* i. p. 254.

Papilio Arge occitanica *Esper*, *Schm.* i. t. 96. *Cont.* 51. f. 3, 4.

Var. *Arge Ixora* *Boisduval*, *Icon. Hist.* pl. 27. f. 3, 4. South-West of Europe, Germany. B. M.

9. ARGE AMPHITRITE.

Papilio Amphitrite *Hübner*, *Eur. Sch. Pap.* fig. 194, 195.; *Godart*, *Enc. M.* ix. p. 508. n. 94.; *Boisduval*, *Icon. Hist.* t. 27. f. 1, 2., *Ind. Meth.* p. 26. n. 193.

Papilio Arge Sulzer, *Gesch. d. Ins.* t. 16. f. 8, 9.; *Cyrtilli*, *Ent. Neap.* tab. 4. f. 6.; *Esper*, *Schmett.* t. 27. *Suppl.* iii. f. 1. t. 70. *Cont.* 20. f. 1.; *Ochs.* *Schm.* v. *Eur.* i. p. 251. n. 38.; *Duponchel*, *Lép. France*, *Suppl.* t. 24. f. 5, 6.; *Lefebvre*, *Ann. Soc. Ent.* pl. 2. f. 3.

Arge Sicula *Borkhausen*, *Eur. Schm.* i. p. 107. and 245. Calabria, Naples, Southern Europe. B. M.

10. ARGE INES.

Papilio Ines *Hoffmansegg* in *Illig. Mag.* iii. p. 205.; *Ochsenheimer*, *Schm.* v. *Eur.* i. p. 237.; *Lefebvre*, *Ann. Soc. Ent.* i. pl. 2. f. 6.; *Boisduval*, *Ind. Meth.* p. 26. n. 194., *Icon. Hist.* t. 27. f. 5, 6.; *Duponchel*, *Pap. Fr. Suppl.* i. pl. 24. f. 1—4.

Pap. Thetis *Hübner*, *Eur. Schm. Pap.* f. 196, 197. Spain, Portugal. B. M.

11. ARGE PHERUSA.

Arge Pherusa *Dahl*; *Boisduval*, *Icon. Hist.* pl. 26. f. 4 —6., *Ind. Meth.* p. 26. n. 192.

An var. *A. Amphitrite* ? Sicily.

Genus XXII. LASIOMMATA.

LASIOMMATA *Westw.*, *E. Doubl.*, *Stephens.*

PARARGA *H. Schiffer.*

DIRA, PARARGE, ÉPINEPHILE, and ENODIA p. *Hübner.*

SATYRUS p. *Godt.*, *Boisduval.*

SATYRES VICICOLES and HERBICOLES p. and RAMICOLES p. *Dup.*

BODY slender, hairy; wings more variegated, with the costal and median veins of the fore pair swollen at the base.

HEAD moderate-sized, very hairy, with a frontal tuft.

Eyes prominent, hairy.

Labial Palpi porrected obliquely, the tips raised to the level of the tops of the eyes, extending forwards as far as the length of the head, very slender; the front of the basal and second joints thickly clothed with long divaricating hairs, extending to the tip; the terminal joint being extremely short.

Antennæ straight, distinctly annulated with white, not quite half the length of the fore wings; terminated by a distinct, compressed, pear-shaped club, the tip being bent outwards; the club, however, varies considerably in shape, being elongated and very gradually formed in some of the exotic species.

THORAX oval, moderate-sized, hairy.

Fore Wings large, elongate-triangular. Costal margin moderately arched; apex rounded. Apical margin entire, more than two thirds of the length of the costal. Inner margin about as long as the apical. Costal and median veins dilated at the base, the latter less so than the former. Veins arranged as in *Arge*. The upper disco-cellular very short, transverse; the middle and lower disco-cellular forming a continuous curved line, the middle one shorter than the lower one. The discoidal cell reaching rather beyond the middle of the wing; a veinlet extending into the discoidal cell, continuous with the lower discoidal vein; another veinlet extending backwards from near the lower extremity of the lower disco-cellular vein.

Hind Wings subovate. Outer margin moderately scalloped. Anal margin not incised near the extremity. Upper disco-cellular vein arising at a short distance from the origin of the branch of the postcostal, considerably curved, and throwing off a veinlet backwards into the discoidal cell: lower disco-cellular vein considerably longer than the upper one, also curved, and united with the median vein at the origin of its third branch, or sometimes preceding the third branch.

Fore Legs small, but distinct, and very hairy in both sexes; those of the male very slender, and more thickly hairy, with the tarsus simple, and acute at the tip. Fore Legs of the female scarcely longer. Tibia shorter than the femur. Tarsus equal to the tibia, dilated, and compressed at the extremity, where it is articulated, and armed on the inside with short spines.

Four Hind Legs moderately long, very slender, scaly. Femur hairy beneath. Tibia and tarsus with very few spines beneath. Ungues curved, acute, simple, dilated into an angulated lobe at the base. Paronychia slender, bifid. Pulvillus small, rounded.

ABDOMEN slender.

CATERPILLAR elongate, villose, with two short points at the tail.

CHRYsalis short, thick, with small angular projections, and two points at the head; suspended by the tail.

The dilatation of the base of the costal and median veins of the fore wings distinguishes the species of this genus from the preceding European genera, whilst the hairy eyes separate them from the following, to which they are intimately allied. They are more varied in

their colours than the preceding European species, and the hind wings are generally marked on the under side with six very elegant ocelli, that next the anal angle being generally doubled, but occasionally wanting. The males of several of the species are distinguished by a dark-coloured oblique bar across the middle of the upper side of the fore wings composed of raised scales, giving the space a satiny appearance.

The Caterpillar of *L. Mæra* is figured by Hübner. It is double-brooded, the second brood living through the winter, and producing the Butterfly in the following May. It feeds on *Poa annua*, *Festuca fluitans*, *Hordeum murinum*, &c. It is pale green, with a dark dorsal and paler lateral lines, and clothed with fine whitish hairs.

The Caterpillar of *L. Megæra* is represented by Hübner, Esper, Sepp, Lewin, &c. It is more slender than that of *L. Mæra*, light green with three dusky stripes. It feeds on different kinds of grasses, and is double-brooded, being found in May and August. The Chrysalis is dark-coloured, with paler protuberances; two obtuse ones on the head, and one on the thorax-case, which is wanting in *L. Mæra*. The Perfect Insect frequents lanes and road sides, especially delighting to settle upon walls.

The Caterpillar of *L. Ægeria* is also figured by Hübner, Kleeman, Sepp, Lewin, Freyer, &c. It feeds on grasses, preferring the common couch grass; and appears in March, May, and June, there being several broods of them in the year.

The Caterpillar of *L. Dejanira* is likewise figured by Hübner and Freyer, and feeds on *Lolium temulentum*. M. Bellier states, however (*Ann. Soc. Ent. France*, 1846, p. xiii.), that he had found the last-named Caterpillar feeding upon an oak.

The species appear to be widely dispersed, being found in all the temperate and warmer parts of Europe, as well as in New Holland. The latter, however, differ in generally wanting the elegant ocelli on the under side of the wings. There are also several undescribed species in the British Museum collection from Santa Fe de Bogota and Colombia, which Mr. E. Doubleday has doubtfully added to the present genus. I likewise possess a fine species from Northern India, which, although having the upper side of the fore wings uniformly coloured, exhibits the oblique silky bar of raised scales in the males.

LASIOMMATA.

1. LASIOM. CLYMENE.

Papilio Clymene Fabricius, Ent. Syst. iii. pt. 1. p. 242. n. 753.; *Esper, Schm.* i. t. 85. *Cont.* 35. f. 1, 2, 3.; *Hübner, Europ. Schm. Pap.* f. 165, 166., *Suppl.* (*H. Schüff.*) f. 102, 103.; *Freyer, Beitr.* pl. 109. f. 1.; *Ochsenh. Schm. v. Eur.* i. p. 215. iv. p. 21.; *Godart, Enc. M.* ix. p. 541. n. 165.; *Duponchel, Léop. France, Suppl.* t. 29. f. 4—7.; *Boisduval, Ic. Hist.* t. 43. f. 4—6.

Var. ? *Pap. Erymanthea Esper, Schm.* t. 202. fig. 3, 4.; *Ochsenh. Schm. v. Eur.* i. p. 222.

Pap. Synclimene Hübner, Verz. bek. Schm. n. 567.

Var. S. *Pap. Anaxandra H. Schüff. Suppl. Hübner, Schm. Eur.* f. 471—473.

Turkey, Hungary, Russia?

B. M.

Lewin, Brit. Butt. f. 1—5.; *Hübner, Europ. Schm. Pap.* f. 177, 178. larvæ, Nymph F. f. 1. a. b.; *Ochsenh. Schm. v. Europ.* i. p. 235., iv. p. 21.; *Westw. & Humphr. Brit. Butt.* p. 66.; *Stephens, Ill. Haustell.* i. p. 55. *Godart, Enc. M.* ix. p. 503. n. 87.

Papilio Mæra Borkhausen, Schm. i. p. 125. Europe, England.

B. M.

2. LASIOM. ROXELANA.

Papilio Roxelana Fabricius, Ent. Syst. iii. pt. 1. p. 227. n. 712.; *Cramer, Pap.* pl. 161. f. C—F.; *Ochsenheim. Schm. v. Europ.* i. p. 217., iv. p. 21.; *Godart, Enc. M.* ix. p. 504. n. 88.; *Duponchel, Léop. de France, Suppl.* t. 30. f. 1—4.; *Hübner, Eur. Schm. Pap.* f. 680—683.; *Freyer, Beitr.* pl. 109. f. 2.

Greece, Turkey, Smyrna.

B. M.

7. LASIOM. TIGELIUS.

Papilio Tigelius Bonelli in Mem. Acad. Torino, xxx. t. 1. f. 2.; *Boisduval, Icones Histor.* t. 45. f. 1—3., *Ind. Meth.* n. 263.; *Duponchel, Pap. Fr. (Suppl.)* i. t. 30. f. 5—7.; *Freyer, Beitr.* pl. 68. f. 1.

Pap. Paramegæra Hübner, Schm. Eur. Pap. f. 842. 844. Sardinia, Corsica.

B. M.

8. LASIOM. ÆGERIA.

Papilio Ægeria Linnæus, Syst. Nat. i. p. 473. (1758), ii. p. 771. n. 143. (12th ed.); *Fabricius, Ent. Syst.* iii. pt. 1. p. 94. n. 293.; *Lewin, Brit. Butt.* t. 19. f. 1. 4.; *Hübner, Eur. Schm. Pap.* f. 181, 182. larvæ, Nymph F. b. f. 1. a. b.; *Ochsenheim. Schm. v. Eur.* i. p. 238., iv. p. 21.; *Steph. Ill. Haust.* i. p. 54.; *Westw. & Humphr. Brit. Butt.* pl. 17. f. 7—10.; *Godart, Enc. M.* ix. p. 504. n. 89.

Var. *Pap. Meone Cramer, Pap.* t. 314. f. E. F.; *Hübner, Eur. Schmett. Pap.* f. 179, 180.; *Ochsenh. Schm. v. Europ.* i. p. 240.; *Esper, Schm.* t. 95. *Cont.* 50. f. 1. England, Germany, Spain, Italy, Portugal.

B. M.

3. LASIOM. MÆRA.

Papilio Mæra Linnæus, Syst. Nat. i. p. 473. (1758), ii. p. 771. n. 141. (12th ed.); *Fabricius, Ent. Syst.* iii. pt. 1. p. 227. n. 711.; *Ochsenh. Schm. v. Europ.* i. p. 231., iv. p. 21.; *Boisduval, Ind. Meth.* n. 269.; *Godart, Enc. M.* ix. p. 501. n. 86.; *Hübner, Eur. Schm. Pap.* f. 174, 175. larvæ, Nymph F. f. 2 a.; *Steph. Ill. H.* i. p. 54. n. . ., *Esper, Schm.* t. 6. f. 2.; *Wood, Ind. Ent.* t. 53. f. 12.

Var. *Pap. Adrasta Ochsenh.; Hübner, Eur. Schm. Pap.* f. 836. 839.

Europe, Italy, France, Germany.

B. M.

9. LASIOM. XIPHIA.

Papilio Xiphia Fabricius, Syst. Ent. p. 492. n. 215., *Ent. Syst.* iii. pt. 1. p. 95. n. 294.; *Godart, Enc. M.* ix. p. 505. n. 90.; *Donovan's Drawings in Bibl. Hope, Oxford;* *Boisduval, Icones Hist.* t. 44. f. 6, 7.; *H. Schüffer, Suppl. Hübner, Eur. Sch. Pap.* f. 84—87.

Madeira, Teneriffe, Portugal.

B. M.

4. LASIOM. HIERA.

Papilio Hiera Hübner, Schmett. Eur. Pap. fig. 176.; *Boisduval, Icon. Hist.* t. 44. f. 1—3.

Helvetia.

5. LASIOM. LYSSA.

Satyrus Lyssa Parreyss; Boisduval, Icon. Hist. pl. 44. f. 4, 5.; *Hübner, Schmett. Eur. Pap.* p. 914. 917.

An hybrid. *Mæra* et *Megæra*?

Pyrarga Mæra var. *H. Schüffer, Syst. Bearb.* p. 89. Dalmatia.

6. LASIOM. MEGÆRA.

Papilio Megæra Linnæus, Syst. Nat. (12th ed.) ii. p. 771. n. 142.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 94. n. 292.;

10. LASIOM. DEJANIRA.

Pap. Dejanira Linnæus, Syst. Nat. ii. p. 774. n. 154.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 230. n. 719.; *Och. Schm. v. Europ.* i. p. 229. n. 30.; *Esper, Schm.* i. t. 9. f. 2.; *Hübner, Europ. Schmett. Pap.* f. 170, 171. larvæ, Nymph F. a. b. f. 1. a.; *Godart, Enc. Meth.* ix. p. 509. n. 96., *Léop. de France*, t. 8. f. 1.; *Freyer, N. Beit.* t. 391.

Central Europe.

B. M.

11. LASIOM. EVERSMAANNI.

Hipparchia Eversmanni Eversmann in Bull. Soc. Imp. Nat. Mosc. 1847, pl. 2. f. 5, 6.

Dauria.?

12. LASIOM. SCHAKRA.
Satyrus Schakra Kollar in *Hugel's Reise n. Kaschmir*,
p. 446. tab. xv. f. 3, 4.
Himalayas.
13. LASIOM. CORDACE.
Tisiphone Cordace Hübner, *Zutrage, exot. Schm.* f. 797,
798.
East India.
14. LASIOM. SATRICUS.
Lasiommata Satricus E. Doubl. MS.; Doubl. Westw. &
Hewits. *Gen. D. Léop.* pl. 64. f. 4.
East India, Darjeeling. B. M.
15. LASIOM. MONTROLII.
Satyrus Montrolii Feisthamel in *Voyage de la Favorite*,
Suppl. pl. 4. and *Mag. de Zool.* 1839, pl. 20.
Satyrus Lefebvrii Guérin, *Voy. Coquille, Zool.* p. 281.
Chili.
16. LASIOM. ? CLERIMON.
Papilio Clerimon Fabricius, *Ent. Syst.* iii. pt. 1. p. 217.
n. 678.; Jones, *Icones*, iv. tab. 15. f. 1.; Godart, *Enc.*
M. ix. p. 512. n. 105.
—— ?
17. LASIOM. ? ZACHAEUS.
Papilio Zachaeus Fabricius, *Ent. Syst.* iii. pt. 1. p. 217.
n. 679.; Jones, *Icones*, iv. tab. 15. f. 2.; Godart, *Enc.*
M. ix. p. 512. n. 103.
—— ?
18. LASIOM. MEROPE.
Papilio Merope Fabricius, *Syst. Ent.* p. 495. n. 228., *Ent.*
Syst. iii. pt. 1. p. 99. n. 306.; Donovan, *Ins. New*
Holl. pl. 28. f. 2.; Godart, *Enc. M.* ix. p. 500. n. 80.
Satyrus Merope Boisduval, *Voy. de l'Astrolabe, Entomol.*
pt. 1. p. 146.
Oreas nubila Oenomaïs Hübner, *Samml. exot. Schm.* Band
i. pl. —.
(Male) Satyrus Archemor Godart, *Enc. M.* ix. p. 500.
n. 81.
New Holland. B. M.
19. LASIOM. PHILEROPE.
Satyrus Philerope Boisd. *Voy. de l'Astrolabe, Entomol.* pt.
1. p. 147.; Guérin, *Voy. Coquille, Zoologie*, p. 279.
Satyrus Klugii Guérin, *Voy. Coquille, Atlas Ins.* pl. 17.
f. 2. and *Voy. de la Favorite, Suppl.* pl. 3. and *Mag.*
Zool. 1839, *Ins.* pl. 19. f. 2.
Port Jackson, New Holland.
20. LASIOM. BANKSIA.
Hipparchia Banksia Leach, *Zool. Misc.* i. tab. x. 1814.
Satyrus Gelanor Godart, *Enc. M.* ix. p. 498. n. 73.
(1819); Boisduval, *Voy. de l'Astrolabe, Ent.* pt. 1.
p. 145.
New Holland. B. M.
21. LASIOM. HOBARTIA.
Lasiom. Hobartia Westw. nov. sp.*
Van Diemen's Land. B. M.
22. LASIOM. ? ACHANTA.†
Papilio Achantia Donovan, *Ins. N. Holland*, pl. 22. f. 2.;
Godart, *Enc. M.* ix. p. 500. n. 82.
Satyrus Achantia Boisduval, *Voyage de l'Astrolabe, Entomol.*
pt. 1. p. 147.
Tisiphone Acanthe Hübner, *Zutr.* f. 267, 268.
New Holland. B. M.
23. LASIOM. ? SINGA.
Satyrus Singa Boisduval, *Voy. de l'Astrolabe, Entomol.* pt.
1. p. 145.; Guérin-Ménév. in *Voy. de la Favorite*,
Suppl. pl. 3. f. 1. 1 a. and *Mag. de Zool.* 1839, *Ins.*
pl. 19.; E. Doubl. *List Lep. B. M.* p. 134.
New Holland. B. M.
24. LASIOM. ? ABEONA.
Papilio Abeona Donovan, *Ins. New Holl.* pl. 22. f. 1.
Satyrus Abeona Boisduval, *Voy. de l'Astrol. Ent.* pt. 1.
p. 144.; E. Doubl. *List. Léop. B. M.* p. 134.; Godart,
Enc. M. ix. p. 490. n. 72.
Oreas marmorea Zelinde Hübner, *Samml. exot. Schm.* Band
i. pl. —.
New Holland. B. M.
25. LASIOM. ? LATHONIELLA.
Lasiom. ? Lathoniella West. nov. sp.‡
Van Diemen's Land. B. M.

* L. alis supra fusco-nigricantibus fulvo-maculatis, maculis discoidalibus anticarum pallidioribus; anticis fascia obliqua lata abbreviata ante medium, alia submedia postice in plagam magnam irregularem fere ad angulum posticum extensam dilatata; tertia angusta abbreviata; quarta subapicali undata abbreviata maculis duabus parvis ovalibus subjectis, punctisque tribus albis antice adjectis: alis posticis maculis tribus maximis discoidalibus; basali cum postica connexa, interna maculam parvam nigram puncto albo ornata, maculisque duabus parvis transversis fulvis punctis duobus albis antice adjectis: alis anticis subtus obscure albido-luteis, disco nigricanti maculis ut in pagina supra dispositis, apice obscure badia: alis posticis obscure rufo-badiis, rufo tenuissime irrorato-strigosis, maculis paginae superae vix distinctis; oculis valde hirtis, vena submediana alarum anticarum basi haud inflata; alis posticis parum repandis. Expans. alar. antic. unc. 1½.

† This and the following species differ from the types of this genus in having the eyes naked, the three principal veins of the fore wings swollen at the base, and the club of the antennae very slender. Their general characters and appearance, however, are so similar to the preceding species, that I have preferred leaving them in this situation rather than separate them generically from the other allied Australian species. They may, perhaps, however, be regarded as a separate subgenus, under the name of Xenica.

‡ L. alis supra fulvis fusco-variegatis; anticis basi, costa, margineque apicali fuscis, fascia obliqua abbreviata ante medium, altera latiori media obliqua in maculam triangularem discoidalem postice terminata, fascia tertia obliqua irregulari in medio angusta serieque subapicali macularum conoidearum fulvarum; ocello unico parvo nigro pupilla alba subapicali: alis posticis fuscis basi fulvo-maculatis maculis duabus discoidalibus magnis arcuatis fulvis; interna ocello unico nigro pupilla albo iride fulva connexa; maculisque subapicalibus arcuatis fulvis: alis subtus pallidioribus maculis similiter dispositis, maculis conoideis subapicalibus anticarum maculisque pallidis posticarum argenteis; his ocellis duobus, uno versus angulum externum, altero versus angulum analem; oculis nudis, clava antennarum magna, venis tribus alarum anticarum basi dilatatis. Expans. alar. antic. unc. 1½.

Genus XXIII. SATYRUS.

SATYRUS p. *Latreille, Boisdual, Godt.*

SATYRUS and EPINEPHELE *Herr. Schäffer.*

HIPPARCHIA p. *Fabricius.*

HIPPARCHIA and ENODIA *Stephens (Cat. Brit. Lep.).*

HIPPARCHIA, MINOIS, EUMENIS, CENEIS, PYRONIA, EPINEPHELE, TISIPHONE, and ENODIA p. *Hübner.*

SATYRES ERICICOLES and RUPICOLES *Duponchel.*

BODY generally rather robust, hairy; wings large, considerably variegated, with the costal and median veins of the fore wings swollen at the base, and the apical margin somewhat scalloped.

HEAD rather small, thickly clothed with rather short hairs.

Eyes prominent, naked.

Labial Palpi rather short, porrected obliquely, but not reaching much above the level of the middle of the eyes, and extending forwards about half the length of the head, rather thickly clothed beneath with moderately short hairs; the middle joint with a compressed conical tuft of hairs in the middle of the hinder margin; terminal joint very short and oval.

Antennæ not near half the length of the fore wings, very slender, articulations indistinct, not annulated with white; terminated either by a short, abrupt, broad, concave club, or by a long, slender, fusiform club, with its base gradually formed.

THORAX oval, clothed especially behind with long soft hairs; wings large.

Fore Wings with the costal and median veins greatly swollen at the base. Costal margin well arched, apical angle rounded, apical margin more than two thirds the length of the costal. Inner margin not, or scarcely, so long as the apical one, nearly straight. Veins arranged as in *Lasiommata*; the third and fourth branches of the post-costal vein being, however, more approximate to each other, leaving a greater space between the extremity of the discoidal cell and the third, and between the fourth and the tip of the wing. The upper disco-cellular vein is extremely short and transverse, and the middle and lower ones nearly continuous and oblique; the latter united with the third branch of the median vein at about the same distance from its origin as exists between the first and second branches. The discoidal cell extends to the middle of the wing.

Hind Wings broadly ovate, more or less scalloped along the outer margin. The anal margin either entire, or slightly incised near its extremity. Veins arranged as in *Lasiommata*, except that the upper disco-cellular vein is longer, and the lower disco-cellular is united to the third branch of the median vein at a rather shorter distance from its origin than exists between the first and second branches of the median vein.

Fore Legs of comparatively moderate length, and distinctly visible in both sexes; those of the males being much more densely clothed with hair, and those of the female rather larger. Tarsus simple in the males, but articulated in the females; not armed, however, with minute spines at the tips of the joints.

Four Hind Legs rather short, scaly. Femora almost entirely destitute of hairs beneath. Tibiæ armed with several rows of spines, set rather widely apart, at the sides beneath; tibial spurs very acute, and rather long. Tarsi armed beneath and at the sides with several rows of short spines; tips of the joints with longer spines.

Ungues entire, long, very acute, and curved. Paronychiae very slender.

ABDOMEN moderately elongate-ovate.

CATERPILLAR pubescent, elongate-conical; head rounded; tail bifurcate; body marked with dark longitudinal stripes.

CHRYSA LIS short, ovoid, glabrous, with the head obtuse and tail pointed; either suspended by the tail, or enclosed in a cocoon of earth mixed with a little silk.

It is here proposed to limit the genus *Satyrus* to those species, generally of large size, which are distinguished by having the costal and median veins of the fore wings dilated at the base, the submedian vein being simple, and by having the eyes naked. The characters detailed above are chiefly derived from *S. semele* and *Fidia*; but numerous modifications, of slight value, however, occur in most of the characters of the different species. Thus, the club of the antennæ varies in shape from the insensibly formed and very slender condition in *S. tithonus*, &c., to the short, broad, nearly rounded form in *S. semele*. The palpi, also, differ somewhat in length, as well as in their clothing of hairs. There is also some difference in the situation of the second branch of the postcostal vein of the fore wings, which in *S. hyperanthus** arises opposite the origin of the upper disco-cellular vein, at the extremity of the discoidal cell.

* This species differs not only in the place of insertion of the second branch of the postcostal vein, but also in the elongated very hairy palpi, and in the style of its markings. It has consequently been separated by Mr. E. Doubleday, with *S. alope*, under the generic name of *Enodia*.

The fore legs offer a still greater amount of variation. The description given above is taken from *S. Semele*; but in *S. Janira* they are shorter (although conspicuous), and very slightly pilose, with the tarsal portion in the males short and slightly compressed, but rather longer in the females and articulated. In other respects they are nearly alike in size and appearance. In *S. Tithonus* they are very minute in both sexes, but rather larger in the females, and very slightly hairy in the tarsal part, more elongated than in the male, and thick at the tip. The same minuteness of size also occurs in *S. Hyperanthus*. Dr. Herrick Schäffer has also pointed out another character separating the *Satyri* into two divisions, which he considers as genera, namely, the rounded and entire, or emarginate condition of the anal margin of the hind wings; those species in which it is entire constituting his genus *Satyrus*, whilst for those in which it is incised he employs the generic name *Epinephele*, proposed for some of them by Hübner.

M. Marloy has published a short notice upon the Larvæ of these insects in the "Annales" of the French Entomological Society for 1838, stating that the chief cause why they are so seldom met with is that they conceal themselves and remain inactive during the day, but come forth to feed by night, when they may be found in great numbers with the help of a lamp. The Caterpillars of *S. Circe*, *Briseis*, *Fidia*, and *Semele* form large cocoons under ground, composed of grains of earth fastened together with a little silk. Their *Chrysalides* are short, ovoid, glabrous, with the head obtuse and tail pointed. *S. Mæra* and *Janira* differ from the preceding in having the *Chrysalis* naked, angular, with the head bifid, and suspended head downwards; the latter circumstance also takes place with *S. Hyperanthus*, *Tithonus*, &c.

The Larva of *S. Tithonus*, according to M. Boisduval, has the hairs of the body bifid. The night-feeding Caterpillars of *S. Circe*, *Briseis*, *Fidia*, and *Semele*, observed by M. Marloy, are of a firm texture, which contrasts with the soft-bodied Caterpillars of the other species. They feed indifferently on different kinds of grasses; they are never found in society, are extremely slow in their movements, and almost naked. It is in the months of March, April, and May, that they may generally be found, as they undergo the *Chrysalis* state in the month of June.

M. Marloy has given detailed descriptions of the Caterpillars of *S. Briseis*, *Semele*, and *Fidia* (op. cit. p. 267.); and those of *S. Proserpina*, *Hermione*, *Phædra*, *Janira*, and *Hyperanthus* are figured by Hübner. Lewin, Moses Harris, Godart, Freyer, Boisduval, and Duponchel have also represented the transformations of several of the preceding species, as well as those of *S. Tithonus* and *Circe*, in their works on the Lepidoptera of Europe.

The species have a wide range over the whole of Europe, extending also to India and Egypt; but I am not aware of any species which inhabit the New World, except among the doubtful species placed at the end of the following list.

SATYRUS.

1. SAT. ACTÆA.

Papilio Actæa Esper, *Schm.* t. 57. *Cont.* 7. f. 1. a. (but not of Fabricius); *Hübner, Europ. Schm. Pap.* f. 151, 152, 610, 611.; *Ochsenh. Schm. v. Eur.* i. p. 193., iv. p. 20.; *Godart, Enc. M.* ix. p. 522. n. 124., *Lép. de France*, i. t. 7.; *Boisduval, Ind. M.* n. 236.

Var. *Pap. Podarce* *Ochsenh. Sch. v. Eur.* i. p. 195.; *Hübner-H. Schüffler, Suppl.* f. 49—51.; *Freyer, N. B.* pl. 463. f. 3, 4.

South of France, Spain, Portugal, Germany.

B. M.

2. SAT. CORDULA.

Papilio Cordula Fabricius, *Ent. Syst.* iii. pt. 1. p. 226. n. 708.; *Ochsenh. Schm. v. Eur.* i. p. 190., iv. p. 20.; *Hübner, Eur. Schm. Pap.* f. 619, 620.; *Godart, Enc. M.* ix. p. 521. n. 122., *Lép. de France*, ii. t. 12.; *Boisduval, Ind. Meth.* n. 237.

Pap. Bryce Hübner, *Schm. Europ. Pap.* f. 724—727. 969, 970. (m.) 619, 620. (f.); *Herr. Sch. Suppl.* f. 619, 620.

Pap. Proserpina *Cyrrill. Ent. Neap.* i. t. 2. f. 11.

Pap. Cyrillus *Herbst, Schm.* t. 206. f. 1, 2.

Pap. Hippolytus *Herbst, Schm.* t. 201. f. 3, 4.

Pap. Actæa Fabricius, *Ent. Syst.* iii. pt. 1. p. 225. n. 705. (but not of Esper.)

Pap. Ferula Fabricius, *Ent. Syst.* iii. pt. 1. p. 225. n. 705.

P. N. G. *Proserpina* *Cyrrill. Ent. Neap.* t. 2. f. 11.

Var. fem. P. *Pæas* Esper, *Schm.* i. t. 112. *Cont.* 67. f. 1.; *Hübner, Europ. Schm. Pap.* f. 132, 133., *Suppl. (H. Sch.)* f. 176.

Alps.

B. M.

3. SAT. BRYCE.

Papilio Bryce Hübner, *Eur. Schm. Pap.* f. 149. 15. (m.); *Ochsenh. Schm. v. Eur.* i. p. 188.; *Godart, Enc. M.* ix. p. 522. n. 123., *Pap. Fr.* ii. t. 12. f. 1, 2.

(Male) *Papilio Actæa* var. *Esper, Schm.* t. 85. f. 4.

(Female) *Papilio Hippodice* Hübner, *Eur. Schm. Pap.* f. 718, 719., *Suppl. (H. Schüffler)* f. 53—58.

Satyrus Cordula var. *Boisduval, Ind. Meth.* n. 237.

South Russia.

4. SAT. VIRBIUS.

Satyrus Virbius *Herr. Schüff. Suppl. Hübner.* f. 45—48., *Syst. Bearb.* p. 79.; *Freyer, N. Beitr.* t. 463. f. 1, 2.

An *Satyrus Bryce* var.?

South Russia.

5. SAT. CYCLOPIUS.

Hipparchia Cyclopius Eversmann in *Bull. Soc. Imp. Nat. Mosc.* 1844, p. 590. t. 14. f. 3.

Irkutsk.

6. SAT. ABD-EL-KADER.

Satyrus Abd-el-Kader *Pierret in Ann. Soc. Ent. de France*, vi. p. 19. pl. 1. f. 5, 6.; *Lucas, Expl. Algér. Lép.* pl. 2. f. 3, 3 a.

Algeria.

7. SAT. PHÆDRA.

Papilio Phædra Linnaeus, *Syst. Nat.* ii. p. 773. n. 150.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 233. n. 729.; *Ochsenh. Schm. v. Eur.* i. p. 186., iv. p. 20.; *Godart, Enc. M.* ix. p. 523. n. 126., *Lép. de France*, i. t. 7.; *Boisduval, Ind. Meth.* n. 238.; *Hübner, Europ. Schm. Pap.* f. 127—129. larvæ, Nymph F. f. 3. a.; *Steph. Ill. H.* i. p. 56. n. 4.; *Wood, Ind. Ent.* t. 53. f. 13.

Papilio Athene Borkhausen, i. t. 71.

Papilio Briseis Esper, *Schm.* t. 6. f. 1.

Papilio Dryas Scopoli, *Ent. Carn.* p. 153. 429.; *Schneider, Syst. Besch.* p. 100.

France, Germany.

B. M.

8. SAT. FIDIA.

Papilio Fidia Linnaeus, *Syst. Nat.* ii. p. 770. n. 138.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 225. n. 706.; *Hübner, Europ. Schm. Pap.* f. 147, 148.; *Ochsenheim, Schm. v. Eur.* i. p. 179., iv. p. 20.; *Godart, Enc. M.* ix. p. 520. n. 120., *Lép. de France*, ii. t. 11. f. 3, 4.; *Boisduval, Ind. Meth.* n. 239.

France, Spain, Germany.

B. M.

9. SAT. FAUNA.

Papilio Fauna Fabricius, *Ent. Syst.* iii. pt. 1. p. 226. n. 709.; *Esper, Schmett.* i. t. 29., *Suppl.* 5.; *Godart, Enc. M.* ix. p. 520. n. 121., *Lép. de France*, i. t. 7.; *Hübner, Eur. Schm. Pap.* f. 107—109. 145, 146., *Suppl.* f. 177, 192, 193.

Pap. Statilinus *Hufnagle, Mag.* ii. p. 84.; *Ochsenh. Schm. v. Europ.* i. p. 184.; *Herbst, Schm.* t. 200. f. 5, 6.; *Freyer, N. Beitr.* pl. 499. f. 2, 3.

Pap. Arachne *Wien. Verz.* p. 169.; *Hübner, Verz.* n. 540.

Var. *Pap. Allionia* Fabricius, *Ent. Syst.* iii. pt. 1. p. 104. n. 322.; *Cyrrilli, Ent. Neap.* sp. 1. t. 2. f. 13.; *Ochsenh. Schm. v. Europ.* i. p. 181., iv. p. 20.; *Hübner, Eur. Schm. Pap.* f. 510, 511. 818, 819

- Var. Pap. Fatua Freyer, *Neue Beitr.* t. 415. f. 3, 4.
 Var. Sat. Martianii H. Schöff. *Suppl. Hübner. Schm. Eur.* f. 190, 191.
 Central and Southern Europe. B. M.
10. SAT. HERMIONE.
 Papilio Hermione Linnaeus, *Syst. Nat.* ii. p. 773. n. 149.; *Wien. Verz.* p. 169. 22.; Fabricius, *Ent. Syst.* iii. pt. 1. p. 232. n. 727.; Ochsensch. *Schm. v. Eur.* i. p. 173., iv. p. 20.; Hübner, *Europ. Schm. Pap.* f. 122—124. larvæ, Nymph F. f. 2. a. b.; Godart, *Enc. M.* ix. p. 515. n. 110., *Lép. de France*, i. t. 7.; Wood, *Ind. Ent.* t. 53. f. 14.
 Papilio Fagi Scopoli, *Ent. Carn.* p. 151. n. 428.
 Papilio Hermione minor Esper, *Schm.* i. t. viii. f. 2.
 Southern Europe, Germany. B. M.
11. SAT. ALCYONE.
 P. Alcyone Wien. *Verz.* p. 169. 21.; Hübner, *Eur. Schm. Pap.* f. 125, 126.; Ochsensch. *Schm. v. Eur.* i. p. 176.; H. Schöff. *Syst. Bearb.* p. 73.; Duponchel, *Pap. Fr. S.* i. t. 27. f. 1, 2.
 Satyrus Hermione var. Boisduval, *Ind. Meth.* p. 30. n. 241., *Icon. Hist.* t. 40. f. 5, 6.
 Papilio Jurtina Hufnagle, *Berl. Mag.* p. 278. n. 42.
 Silesia, Saxony, France.
12. SAT. PROSERPINA.
 Papilio Proserpina Wien. *Verz.* p. 169.; Hübner, *Eur. Schm. Pap.* f. 119—121. larvæ, Nymph f. 1. a. b.; Ochsensch. *Schm. v. Europ.* i. p. 167., iv. p. 20.
 Papilio Circe Fabricius, *Ent. Syst.* iii. pt. 1. p. 233. n. 728.; Godart, *Enc. M.* ix. p. 513. n. 108., *Lép. de France*, i. t. 7.; Boisduval, *Ind. Meth.* n. 242.
 P. Velleda Naturforscher, st. vi. p. 17.
 South Europe, France, Germany. B. M.
13. SAT. PADMA.
 Satyrus Padma Kollar in Hugel's *Reise n. Kaschmir*, p. 445. t. xv. f. 1, 2.
 Himalayas.
14. SAT. BRISEIS.
 Papilio Briseis Linnaeus, *Syst. Nat.* ii. p. 770. n. 139.; *Wien. Verz.* p. 169. 20.; Fabricius, *Ent. Syst.* iii. pt. 1. p. 231. n. 721.; Ochsensch. *Schm. v. Eur.* i. p. 170., iv. p. 20.; Godart, *Enc. M.* ix. p. 514. n. 109., *Lép. de France*, i. t. 7.; Westw. & Humphr. *Brit. Butt.* t. 19. f. 1, 2.; Hübner, *Europ. Schm. Pap.* f. 130, 131., *Suppl. H. Schöff.* p. 180, 181.; Freyer, *N. Beitr.* tab. 481.
 P. Ianthé major Esper, *Schmett.* i. tab. xxvii., *Suppl.* ii. f. 1.
 Pap. Dædale Borkhausen, *Europ. Schm.* i. p. 67.
 Var. fem. Pap. Pirata Hübner, *Europ. Schm. Pap.* f. 604, 605.; Esper, *Schmett.* tab. c. *Cont. Lv.* f. 3.
 Germany, Central and Southern Europe. B. M.
15. SAT. BEROE.
 Satyrus Beroe Fridvaldsky MS.; Hübner, *Eur. Schm. Suppl.* p. 108—111. (Herr. Schöff.); Freyer, *N. Beitr.* t. 415. f. 1, 2.; E. Doubl. *List Lep. B. Mus. App.* p. 32.
 Crete, Turkey. B. M.
16. SAT. BRAHMINUS.
 Satyrus Brahminus Blanchard in Jacquemont's *Voyage in India*, t. 2. f. 4—6.
 Satyrus Jacquemontii Boisduval MS.
 Northern India, Nepaul. B. M.
17. SAT. PRIEURI.
 Satyrus Prieuri Pierret in *Ann. Soc. Ent. France*, vi. p. 304. pl. 12. f. 6.
 Barbary.
18. SAT. SWAHA.
 Satyrus Swaha Kollar in Hugel's *Reise n. Kaschmir*, p. 444. t. xiv. f. 1, 2.
 Himalayas.
19. SAT. SARASWATI.
 Satyrus Saraswati Kollar in Hugel's *Reise n. Kaschmir*, p. 445. t. xiv. f. 3, 4.
 Himalayas.
20. SAT. ANTHE.
 Satyrus Anthé Ochsensch. *Schmett. v. Eur.* i. p. 169., iv. p. 131.; Godart, *Enc. M.* ix. p. 826. n. 109, 110., *Lép. de France, Suppl. (Duponchel)* i. t. 27. f. 3, 4.; Boisduval, *Icon. Hist.* t. 40. f. 3, 4., *Ind. Meth.* n. 444.
 Pap. Persephone Hübner, *Schm. Eur. Pap.* f. 589, 590. 710, 711.; Illiger, *Mag. v. p.* p. 182.
 Var. S. Hanifa H. Schöff., *Suppl. Hübner. Schm. Eur.* Pap. f. 477, 478.
 South Russia. B. M.
21. SAT. ANTHELEA.
 Papilio Anthelea Hübner, *Eur. Schm. Pap.* f. 861, 862.; H. Schöff. *Suppl.* f. 178, 179. 303, 304.; Boisduval, *Icon. Hist.* t. 41. f. 1—4., *Ind. Meth.* n. 245.; Duponchel, *Lép. France, Sup.* i. t. 27. f. 5, 6.; Freyer, *N. Beitr.* pl. 265. f. 2, 3.; Lefebvre in Guérin, *Mag. Zool.* 1830, tab. 3.; Doubl. *Westw. & Hewits. Gen. D. Lep.* pl. 65. f. 3.
 Hipparchia Telephassa Klug in Hemprich et Ehrenberg, *Symb. Phys. Ins.* t. 29. f. 1, 2. (m.) 3, 4. (f.); Duponchel, *op. cit.* pl. 28. f. 1, 2.
 Eumenis Thelephassa Hübner, *Samml. exot. Schm. Band* ii. pl. —.; H. Schöff. *Suppl. Hübner. Eur. Sch. Pap.* f. 305, 306.
 Turkey, Smyrna. B. M.
22. SAT. PONTICA.
 Hipparchia Pontica Fridvaldsky MS.; Freyer, *N. Beitr.* t. 475. f. 2, 3.
 Crete.
23. SAT. AUTONOE.
 Papilio Autonoe Fabricius, *Ent. Syst.* iii. pt. 1. p. 231. n. 723.; Ochsensch. *Sch. v. Eur.* i. p. 177.; Esper, *Schm.* t. 86. *Cont.* 36. f. 1—3.; Hübner, *Europ. Schm. Pap.* f. 137, 138.; H. Schöff., *Suppl.* f. 127—130.; Godart, *Enc. M.* ix. p. 518. n. 114.; Treitschke, *Schm. v. Eur. Suppl.* xv. 1. 222.; Freyer, *N. Beitr.* pl. 283. f. 1, 2.; Boisduval, *Icon. Hist.* t. 41. f. 5, 6., *Ind. Meth.* n. 246.; Duponchel, *Lép. de France, Suppl.* t. 28. f. 3, 4.
 Steppes of Russia. B. M.
24. SAT. SEMELE.
 Papilio Semele Linnaeus, *Syst. Nat.* i. p. 474. (1758) ii. p. 772. n. 148. (12th ed.); Fabricius, *Ent. Syst.* iii. pt. 1. p. 232. n. 275.; Lewin, *Brit. Butt.* t. 17. f. 1—5.; Hübner, *Eur. Schm. Pap.* f. 143, 144. 826, 827., *Suppl.* f. 182.; Ochsensch. *Schm. v. Eur.* iv. p. 20.; Steph. *Ill. Haust.* i. p. 56.; Westw. & Humphr. *Brit. Butt.* t. 18. f. 6—10.; Godart, *Enc. M.* ix. p. 516. n. 111.
 Pap. Danae Hufnagle, *Mag.* ii. p. 82. n. 50.
 Europe, Germany. B. M.
25. SAT. ARISTÆUS.
 Papilio Aristæus Bonelli in *Mem. R. Acad. Torino*, xxx. t. 2. f. 1.
 Sat. Aristæus Herr. Schöff. *Syst. Bearb.* p. 75.; Freyer, *N. Beitr.* t. 397.
 Pap. Semele var. Hübner, *Eur. Schm. Pap.* f. 832—835.
 Sat. Semele var. ? Boisduval, *Ind. Meth.* p. 31. n. 247.
 Corsica, Sardinia.
26. SAT. HIPPOLYTE.
 Papilio Hippolyte Herbst, *Schm.* t. 211. f. 3, 4.; Zetterst. *Ins. Lapp.* p. 901. n. 3.; Ochsensch. *Schm. v. Eur.* iv. p. 20.; Freyer, *N. Beitr.* pl. 278. f. 1, 2.; Boisduval, *Ind. Meth.* n. 248., *Icon. Hist.* t. 42. f. 1, 2.; Duponchel, *Lép. Fr. Suppl.* t. 28. f. 5, 6.
 Papilio Agave Borkhausen, *Europ. Schm.* i. p. 103. n. 43.; Hübner, *Eur. Schm. Pap.* t. 139, 140., *Suppl. (H. Sch.)* f. 80—83.

Papilio Alcyone Fabricius, Ent. Syst. iii. pt. 1. p. 231. n. 724.; Godart, Enc. Meth. ix. p. 517. n. 112.
South Russia, Sierra Nevada, Spain, Lapland. B. M.

27. SAT. ARETHUSA.

Papilio Arethusa Wien. Verz. p. 169. 16.; Fabricius, Ent. Syst. iii. pt. 1. p. 232. n. 726.; Hübner, Europ. Schm. Pap. f. 154, 155. 937, 938.; Ochsenheim. Schm. v. Eur. i. p. 208., iv. p. 20.; Esper, Schm. t. 69. Cont. 19. f. 3, 4.; Godart, Enc. M. ix. p. 517. n. 113., Lép. de France, i. t. 7.
Var. *Pap. Erythia Hübner, Eur. Schm. Pap. f. 591, 592.*
Var. ? *Pap. Boabdil Rambur, Faun. Ent. Andal. pl. 12. f. 1, 2.; H. Schöff. Suppl. Hübner, Eur. Schm. Pap. f. 474—476.*

Central and Southern Europe.

B. M.

28. SAT. NEOMYRIS.

Satyrus Neomyris Godart, Lép. de France, ii. t. 11. f. 1, 2.; Boisduval, Ind. Meth. n. 250., Icon. Hist. t. 41. f. 6—8.
Pap. Marmoræ Hübner, Europ. Schm. Pap. f. 814—817.
Pap. Iolaus Bonelli in Mem. Acad. Torino, xxx. t. 3. f. 1.; Treitschke, Schm. v. Eur. x. p. 27.; Freyer, Beitr. t. 67. f. 2.; Herr. Schöff. Syst. Bearb. p. 75.

Corsica, Sardinia.

B. M.

29. SAT. PELOPEA.

Hipparchia Pelopea Klug in Ehrenb. & Hempr. Symbol. Phys. t. 29. f. 5, 6. (m.) 7, 8. (f.).
Mount Lebanon.

30. SAT. PISIDICE.

Hipparchia Pisidice Klug in Ehrenb. & Hempr. Symbol. Phys. t. 29. f. 9, 10.
Mount Sinai.

31. SAT. NARICA.

Pap. Narica Hübner, Eur. Schm. Pap. f. 704—707.; Freyer, N. Beitr. pl. 464. f. 2, 3.; Boisduval, Icon. Hist. t. 42. f. 3—5.; Duponchel, Pap. France, Suppl. i. pl. 29. f. 1—4.; Tauscher in Mem. Soc. Nat. Mosc. tom. 1.
Siberia, Ural.

32. SAT. EUDORA.

Pap. Eudora Fabricius, Ent. Syst. iii. pt. 1. p. 243. n. 755.; Esper, Schm. i. t. 45., Suppl. 21. f. 1. t. 69. Cont. 19. f. 1, 2.; Hübner, Eur. Schm. Pap. f. 160 163, 164.; Ochsenh. Schm. v. Eur. i. p. 223., iv. p. 21.; Boisduval, Ind. Meth. n. 252.; Godart, Enc. M. ix. p. 541. n. 164., Lép. France, ii. t. 18. 1, 2. (m.) 3. (f.).
Pap. Janirula Esper, Schm. t. 113. Cont. 68. f. 1.
Pap. Lycaon Naturforsch. iii. t. 2. f. d—f.
France, Germany.

B. M.

33. SAT. RHAMNUSIA.

Erebia Rhamnusia H. Schöff. Suppl. Hübner, Eur. Schm. Pap. f. 377, 378. (fem.) 427, 428. (male); Freyer, N. Beitr. t. 457. f. 2, 3. (An var. H. Eudoræ?)
Sicily.

34. SAT. TABITHA.

Papilio Tabitha Fabricius, Ent. Syst. iii. pt. 1. p. 243. n. 756.; Godart, Enc. M. ix. p. 512. n. 104.
East India.

35. SAT. JANIRA.

Papilio Janira Linnaeus, Syst. Nat. i. p. 475. (1758), ii. p. 774. n. 156. (12th ed.) (male); Fabricius, Ent. Syst. iii. pt. 1. p. 241. n. 752.
Hipp. Janira Ochsenh. v. Eur. iv. p. 21.; Stephens, Ill. Haust. i. p. 59.; Godart, Enc. M. ix. p. 539. n. 163.; Westw. & Humphr. Brit. Butt. t. 20. f. 1—5.; Lewin, Brit. Butt. t. 18. f. 1—5.; Hübner, Eur. Schm. Pap. f. 161, 162., Suppl. II. Schöff. f. 104, 105. 429. larvæ,
June 2, 1851.

Nymph F. a. f. 2. a. b.; Ingram. Pap. Eur. ii. p. 2. 66. Supp. xii. f. 54. l. m.

Papilio Jurtina Linnaeus, Syst. Nat. i. p. 475. (1758), ii. p. 774. n. 155. (12th ed.) (female).
Var. *P. Hispulla Esper, Schm. i. t. 119. Cont. 74. f. 1, 2.; Hübner, Eur. Schm. Pap. f. 593—596.*

Europe.

B. M.

36. SAT. TITHONUS.

Papilio Tithonus Linnaeus, Mant. i. p. 537. (1771); Lewin, Brit. Butt. t. 22. f. 1—5.; Ochsenh. Schm. v. Eur. i. p. 210., iv. p. 21.; Stephens, Ill. Haust. i. p. 58.; Godart, Enc. M. ix. p. 542.; Westw. & Humphr. Brit. Butt. pl. 19. f. 3—7.
Pap. Herse Wien. Verz. p. 320.; Hübner, Eur. Schm. Pap. f. 156, 157. 612.
Papilio Pilosellæ Fabricius, Syst. Ent. ii. p. 497. (1775), Ent. Syst. iii. pt. 1. p. 240. n. 748.; Cyrilli, Ent. Neap. t. 3. f. 2.
Papilio Amaryllis Borkhausen, Eur. Schm. i. p. 80. 238.
Papilio Phædra Esper, Schmett. t. 9. f. 1.
Papilio Tithonius Vill. Ent. ii. p. 26.

Europe.

B. M.

37. SAT. TELMESSIA.

Epinephele Telmessia H. Schöff. Suppl. Hübner, Eur. Schm. Pap. f. 479—482.
—?

38. SAT. IDA.

Pap. Ida Fabricius, Ent. Syst. iii. pt. 1. p. 240. n. 749.; Hübner, Eur. Schm. Pap. f. 158, 159., Suppl. (H. Schöff.) f. 183. (fem.); Ochsenh. Schm. v. Eur. i. p. 212., iv. p. 21.; Godart, Enc. M. ix. p. 543. n. 167., Lép. de France, t. 18. f. 4, 5.
P. Actæa Lang. Verz. ii. p. 23. n. 165.
South of France, Germany.

B. M.

39. SAT. PASIPHAÆ.

Papilio Pasiphae Esper, Schm. i. t. 67. Cont. 17. f. 4. t. 97. Cont. 52. f. 1.; Hübner, Schm. Europ. Pap. f. 167—169.; Ochsenh. Schm. v. Eur. i. p. 214. iv. p. 21.; Boisduval, Ind. Meth. p. 32. n. 256.
Papilio Bathseba Fabricius, Ent. Syst. iii. pt. 1. p. 235. n. 733.; Godart, Enc. M. ix. p. 543. n. 108., Lép. de France, t. 18. f. 6, 7.
Papilio Salome Fabricius, Ent. Syst. iii. pt. 1. p. 238. n. 744.
France, Spain, Barbary.

B. M.

40. SAT. MAMURRA.

Satyrus Mamurra H. Schöff. Suppl. Hübner, Eur. Schm. Pap. f. 314, 315.
—?

41. SAT. WAGNERI.

Hipparchia Wagneri H. Schöff. Suppl. Hübner, Eur. Schm. Pap. f. 311—313.; E. Doubl. List Lep. B. Mus. App. p. 32.
Caucasus.

B. M.

42. SAT. BISCHOFFII.

Satyrus Bischoffii H. Schöff. Suppl. Hübner, Eur. Schm. Pap. f. 309, 310.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 65. f. 4.
Turkey.

43. SAT. GEYERI.

Satyrus Geyeri H. Schöff. Suppl. Hübner, Eur. Schm. Pap. f. 301, 302.
—?

(Subg. ENODIA Hübner; E. Doubleday.)

44. SAT. (ENODIA) HYPERANTHUS.

Pap. Hyperanthus Linnaeus, i. p. 471. (1758), Syst. Nat. ii. p. 768. n. 127. (12th ed.); Fabricius, Ent. Syst. iii. pt. 1. p. 216. n. 177.; Lewin, Brit. Butt. t. 20. f. 1—5.; Ochsenh. Schm. v. Europ. i. p. 225., iv. p.

21. ; *Stephens, Illust. Haust.* i. p. 60. ; *Godart, Enc. M.* ix. p. 538. n. 162. ; *Westw. & Humphr. Brit. Butt.* t. 20. f. 7. ; *Lewin, Brit. Lep.* pl. 20.
 Pap. Polymeda *Scopoli, Ent. Carn.* p. 157. n. 434. ;
Hübner, Eur. Schm. Pap. f. 172, 173. larvæ, Nymph.
 a. b. f. 2. a. b.
 Var. Pap. Arete *Müller, Faun. Fried.* p. 36. n. 330. ;
Schneider, Syst. Besch. p. 102. n. 42.
 Var. Pap. Vidua *Müller, Faun. Fried.* p. 36. n. 331.
 Europe. B. M.
45. SAT. (ENODIA) ALOPE.
 Papilio Alope *Fabricius, Ent. Syst.* iii. pt. 1. p. 229.
 n. 715. ; *Jones, Icones*, iv. t. 12. f. 1. ; *Godart, Enc. M.* ix. p. 524. n. 127. ; *Boisduval & Leconte, Icon. Lep. Amer. Sept.* t. 59.
 North America, United States. B. M.
46. SAT. (ENODIA) PEGALA.
 Papilio Pegala *Fabricius, Syst. Ent.* p. 494., *Ent. Syst.* iii. pt. 1. p. 230. n. 720. ; *Donovan's Drawings in Bibl. Hope, Oxford* ; *Godart, Enc. M.* ix. p. 524. n. 128.
 North America.
 ———
 (Subg. ERITES *Boisduval*.)
47. SAT. (ERITES) MADURA.*
 Hipparchia Madura *Horsfield, Cat. Lep. Ins. East Ind. Comp.* pl. 5. f. 8, 8. a.
 Erites Medura *Boisduval MS.*
 Java. B. M.
 ———
 DOUBTFUL SPECIES.
48. SAT. ? OSYRIS.
 Satyrus Osyris *Boisduval, Voy. de l'Astrolabe, Entomol.* pt. 1. p. 154.
 Offack.
49. SAT. ? DELILA.
 Papilio Delila *Fabricius, Ent. Syst.* iii. pt. 1. p. 234, n. 731.
 Satyrus Denina *Godart, Enc. M.* ix. p. 487. n. 30.
 Guinea ?
50. SAT. ? MARDANIA.
 Papilio Mardania *Fabricius, Ent. Syst.* iii. pt. 1. p. 249. n. 776. ; *Jones, Icones*, iv. t. 70. f. 1. ; *Godart, Enc. M.* ix. p. 498. n. 74.
 (In Indiis, Fabr.)
51. SAT. ? LYCAON.
 Papilio Lycaon *Fabricius, Ent. Syst.* iii. pt. 1. p. 228. n. 714. ; *Jones, Icones*, iv. t. 17. f. 1. ; *Godart, Enc. M.* ix. p. 499. n. 76.
 ——— ?
52. SAT. ? HERSE.
 Papilio Herse *Fabricius, Ent. Syst.* iii. pt. 1. p. 229. n. 718. (but not of Cramer) ; *Jones, Icones*, iv. t. 7. f. 2. ; *Godart, Enc. M.* ix. p. 499. n. 77.
 ——— ?
53. SAT. ? MINERVA.
 Papilio Minerva *Fabricius, Ent. Syst.* iii. pt. 1. p. 95. n. 295. ; *Godart, Enc. M.* ix. p. 499. n. 78.
 America.
54. SAT. ? PLUTO *Westw.*
 Papilio Proserpina *Fabricius, Ent. Syst.* iii. pt. 1. p. 228. n. 713. (but not of the W. V.) ; *Jones, Icones*, v. t. 24. f. 1. ; *Godart, Enc. M.* ix. p. 499. n. 79.
 ——— ?
55. SAT. ? CONSTANTIUS.
 Papilio Constantius *Fabricius, Ent. Syst.* iii. pt. 1. p. 152. n. 468. ; *Jones, Icones*, vi. t. 50. f. 1. ; *Godart, Enc. M.* ix. p. 511. n. 99.
 ——— ?
56. SAT. ? MERGUS.
 Papilio Mergus *Fabricius, Ent. Syst.* iii. pt. 1. p. 159. n. 490. ; *Jones, Icones*, iv. t. 41. f. 2. ; *Godart, Enc. M.* ix. p. 513. n. 107.
 Africa.
57. SAT. ? LYSIUS.
 Satyrus Lysius *Ménétries in Nouv. Mém. Soc. Nat. Mosc.* iii. (1834) p. 39.
 Antilles.

* This beautiful species has the hind wings deeply scalloped, the costal vein alone of the fore wings swollen, and the clubs of the antennæ very slender. Its markings are also very peculiar and elegant.

Genus XXIV. MYCALESIS.

MYCALESIS *Hübner, E. Doubleday.*
 SATYRUS p. *Godt., Boisduval.*

Body slender, finely hairy ; wings rather large, plainly and uniformly coloured, those of the males generally with a tuft of hairs on the upper side.

HEAD rather small, with a small conical tuft of hairs in front.

Eyes naked, prominent.

Antennæ scarcely half the length of the fore wings ; very slender ; joints scarcely distinct ; terminated by a long but very slender club.

Labial Palpi porrected obliquely ; the tip elevated rather above the level of the top of the eyes, and advanced in

front rather farther than the length of the head, very slender; the first and middle joints sparingly clothed beneath with long porrect delicate bristles; the middle of the second joint also clothed on the back with a tuft of short hairs; terminal joint very slender, acute at the tip, short, and scarcely setose.

THORAX rather small, rather compressed, and very convex.

Fore Wings with the costal margin strongly arched. Apex rounded. Apical margin varying from slightly convex to slightly concave, entire, about three fifths of the length of the costal. Inner margin about one fourth longer than the apical, rather dilated in the males. Costal vein strongly swollen at the base. Postcostal vein with the first and second branches arising before the anterior extremity of the discoidal cell, which extends to the middle of the wing. Upper disco-cellular vein very minute; middle one longer, curved, rather obliquely directed towards the base of the wing; outer disco-cellular much longer, strongly arched, united with the third branch of the median vein at a short distance from its origin. In the species in which the base of the median vein is not swollen, the space between its first and second branches is much longer than usual, the space between the base of the wing and the first branch being proportionately shortened; in others the base of this vein is swollen, and the space between the first and second branches as short as usual. Submedian vein simple, and curved at the base in some species, which have a slit enclosing a tuft of hairs opposite the origin of the first branch of the median vein; but greatly swollen at the base in other species, which have not this slit, the tuft of hairs being placed in these on the upper surface of the hind wings.

Hind Wings with the costal vein extending about two thirds of the length of the costa. Postcostal vein arising opposite the origin of the precostal; its branch arising at a considerable distance from its base. The disco-cellular veins forming a nearly continuous rather obliquely transverse termination to the discoidal cell; uniting with the median vein exactly at, or a little beyond, the origin of its third branch. The discoidal cell in some species bears along its outer edge a tuft of long pale hairs; whilst in others it is more generally clothed with numerous shorter hairs. Outer margin slightly scalloped.

Fore Legs of the male small. Femur clothed with scaly hairs, slender, as long as the tibia and tarsus, which are thickly clothed with short hairs. *Fore Legs* of the female much longer, slender. Tibia rather shorter than the femur or tarsus, which latter is articulated; the articulations armed with short spines beneath; the tips destitute of unguis.

Four Hind Legs rather long and slender, scaly, destitute of hairs, and with only a few very small spines on the sides of the tibiae beneath. The tarsi also almost destitute of spines, and thickly squamose; the scales hiding the terminal unguis.

ABDOMEN slender.

This is a genus of moderate-sized butterflies, for the most part natives of Africa and the East, distinguished by their uniform dull colours, being generally either black or brown, occasionally varied by a single large eye-like spot on the upper side of the fore wings, and with a few ocelli near the outer margin of the hind wings. On the under side they are often marked with a pale slender oblique bar, running across all the wings, with the ocelli larger, and often elegantly tinged with silver. The most important character which I have observed consists in the existence of a tuft of elongated hairs, either on the upper surface of the fore wings near the hinder margin, where there is a long slender slit, or rather pocket, for its reception, or on the disc of the hind wings, where it is covered by the inner margin of the fore ones. This tuft of hairs occurs as usual only in the males, and its situation serves to divide the genus into two groups, the former having *M. Hesione* as its type, and the latter *M. Polydecta*. I have considered this character, together with the uniform position of the branches of the postcostal vein of the fore wings, and the broad nearly transverse termination of the discoidal cell of the hind wings, as of greater importance than the variations in the swollen condition of the base of the principal veins of the fore wings, which, as above described, differ materially in the two groups.

MYCALESIS.

1. MYC. POLYDECTA.

Papilio Polydecta Fabricius, *Spec. Ins.* ii. p. 85. n. 373., *Ent. Syst.* iii. pt. 1. p. 107. n. 329.; *Cramer, Pap.* pl. 144. f. E. F.; *Godart, Enc. M.* ix. p. 511. n. 101.

Papilio Perseus Fabr. *Syst. Ent.* p. 488. n. 199., *Ent. Syst.* iii. pt. 1. p. 219. n. 685.; *Jones, Icones*, vi. t. 49.; *Donovan, Ins. N. Holl.* pl. 26. f. 3.

Var. ? *Papilio Otreia* Cramer, *Pap.* pl. 314. f. A. B.

Var. ? *Papilio Mamerta* Cramer, *Pap.* pl. 326. f. D.

Papilio Francisca Cramer, *Pap.* pl. 326. f. E. F.

China, Bengal, New Holland.

2. MYC. MARTIUS.

Papilio Martius Fabricius, *Ent. Syst.* iii. pt. 1. p. 219. n. 686.; *Jones, Icones*, vi. t. 49. f. 1.; *Donovan's Drawings in Bibl. Hope, Oxford*; *Godart, Enc. M.* ix. p. 512. n. 102.

Satyrus Bacchus Boisduval MS.

Guinea.

B. M.

3. MYC. MINEUS.

Papilio Mineus Linnæus, *Syst. Nat.* ii. p. 768. n. 126.; *Fabricius, Syst. Ent.* p. 488., *Ent. Syst.* iii. pt. 1. p. 158. n. 488.; *Godart, Enc. Meth.* ix. p. 510. n. 97.;

Boisduval, Voy. de l'Astrolabe, Ent. pt. 1. p. 154.

Papilio Blasius Fabricius, *Ent. Syst. Suppl.* v. p. 426. n. 488—489.

Var. ? *Papilio Justina* Cramer, *Pap.* pl. 326. f. C.

Var. ? *Papilio Drusia* Cramer, *Pap.* pl. 84. f. C. D. var. ?

China, Bengal, Java, Amboyna, Timor.

B. M.

4. MYC. HESIONE.

Papilio Hesione Fabricius, *Ent. Syst.* iii. pt. 1. p. 100. n. 308.; *Cramer, Pap.* pl. 11. C. D.; *Godart, Enc. M.* ix. p. 510. n. 98.; *Boisduval, Voy. de l'Astrolabe, Ent.* pt. 1. p. 153.

Var. *Papilio Medus* Fabricius, *Syst. Ent.* p. 488. n. 198.

Papilio Doris Cramer, *Pap.* pl. 362. f. C.

Java, Amboyna, King's Island (Surinam and Cape of Good Hope, Fabricius).

B. M.

5. MYC. ZOPHYRUS.
Satyrus Zophyrus Kollar in *Hugel's Reise n. Kaschmir*,
p. 450.
An var. Papilio Tabitha Fabricius?
Himalaya, Kaschmir.
6. MYC. FUNEBRIS.
Satyrus funebris Guérin, *Icon. R. An.* texte, p. 487.
Senegal.
7. MYC. EVADNE.
Papilio Evadne Cramer, *Pap.* pl. 222. f. E. F.
Satyrus Servatius Godart, *Enc. M.* ix. p. 525. n. 130.
Sierra Leone (Cramer), America? (Godart).
8. MYC. ADOLPHEI.
Satyrus Adolphei Guérin-Ménév. in *Delessert. Souv. Voy.*
Inde, p. 76.
Neelgherry Mountains.
9. MYC. NARCISSUS.
Papilio Narcissus Fabricius, *Ent. Syst. Suppl.* v. p. 428.
n. 672, 673.; Godart, *Enc. M.* ix. p. 551. n. 181.;
E. Doubl. List Lep. B. M. App. p. 33.; Boisduval,
Faun. Ent. de Madagascar, p. 59.; ditto in *Delegorgue*,
Voyage en Afrique, II. p. 594.
Isle of France, Cape of Good Hope, Port Natal. B. M.
10. MYC. SAFITZA.
Mycalesis Safitza Hewits. *MS.* *; *Doubl. Westw. & Hewits.*
Gen. D. Lep. pl. 66. f. 3.
Africa.
11. MYC. NICOTIA.
Mycalesis Nicotia Hewitson *MS.* †; *Doubl. Westw. &*
Hewits. Gen. D. Lep. pl. 66. f. 4.
East India.
12. MYC. GAMBIUS.
Satyrus Gambius Boisduval *MS.*; *E. Doubl. List Lep.*
Brit. M. p. 139.
South Africa. B. M.
13. MYC. ? RENATA.
Papilio Renata Cramer, *Pap.* pl. 326. f. A.
Surinam.
14. MYC. OSTREA.
Mycalesis Otreia Hübner, *Zutrage exot. Schm.* f. 79, 80.
(but not of Cramer).
Georgia, Florida (Hübner), Northern India (E. Doubl.).
B. M.
15. MYC. ? MELUSINA.
Papilio Melusina Fabricius, *Ent. Syst.* III. pt. 1. p. 240.
n. 750.; Godart, *Enc. M.* ix. p. 496. n. 66. ?; *E.*
Doubleday, List Lep. Brit. Mus. p. 138. (Neon. Mel.)
Papilio Miriam Fabricius, *Ent. Syst.* III. pt. 1. p. 242.
n. 754.; Jones, *Icones*, VI. t. 32. f. 2.
Papilio Dorothea Cramer, *Pap.* pl. 204. f. E. F.; Hübner,
Verz. bek. Schm. n. 625.
Sierra Leone, (King's Island, South Seas, Godart). B. M.
16. MYC. ? TERMINUS.
Papilio Terminus Fabricius, *Syst. Ent.* p. 488. n. 200.,
Ent. Syst. III. pt. 1. p. 220. n. 687.; Donovan, *Ins.*
New Holl. pl. 28. f. 4.; Boisduval, *Voy. de l'Astrolabe*,
Entom. pt. 1: p. 148.; Godart, *Enc. M.* ix. p. 501.
n. 84.
New Holland.
17. MYC. ? REMULIA.
Papilio Remulia Cramer, *Pap.* pl. 237. f. F. G.; Godart,
Enc. M. ix. p. 501. n. 85.; Boisduval, *Voy. de*
l'Astrolabe, Entomol. pt. 1. p. 150.; *E. Doubl. List*
Lep. Brit. M. App. p. 32.
Java, Amboyna, New Guinea, Repulse Bay, Australia.
B. M.

Genus XXV. YPTHIMA.

YPTHIMA Hübner, *E. Doubleday*.
SATYRUS p. Boisduval.
HIPPARCHIA p. Klug.

Body small; wings rather large, entire, uniformly and plainly coloured; the fore ones generally with a large eyelet near the extremity.

HEAD small, clothed with long hairs in front.

* "Upper side dark brown, the outer margin with two black lines; the anterior wing with an apical rufous spot, in the middle of which is a small black eye pupillated with white.

"Under side with the basal half dark brown, bordered by a narrow common line of purple, followed on the anterior wing by two eyes, of which the apical one is much the smaller, and placed upon a rufous spot, the lower one encircled by a purple ring; on the posterior by seven, of which the first, fourth, and fifth are the largest, the whole encircled by a tortuous line of purple: two lines of the same colour margin both wings. All the eyes are deep black, with rufous margins and black pupils. Expans. $1\frac{1}{10}$ inch." — Hewitson *MS.*

† "Upper side brown, the posterior margin of both wings bordered by several parallel lines of black and light brown; the anterior with two black eyes, margined by rufous brown and pupillated with white, the lower one much the larger; the posterior wing with one similar eye.

"Under side rufous brown, undulated with numerous darker stræ, broadly margined with lilac, on which are three black lines, crossed beyond the middle by a narrow common belt of yellow, followed by a broader band of dark brown, in which are numerous ocelli: on the anterior wing five, the lowest much the largest; on the posterior seven, the first oval, larger than the three following, which are small; the fifth largest, the sixth and seventh small; all deep black, with rufous margins and white pupils. Expans. $2\frac{3}{10}$ inch." — Hewitson *MS.*

Eyes prominent, naked.

Antennæ not half the length of the fore wings, very slender, ringed with white; terminated by a very slender club, gradually formed, with the joints short, and finely carinated beneath on the inner side.

Labial Palpi rather long, slender, acute at the tip, porrected obliquely, straight, compressed; the tip elevated to the level of the top of the eyes, and extending forward further than the length of the head, clothed beneath with long, straight, divergent, slender, bristly hairs; the terminal joint being but slightly hairy.

THORAX small, clothed in front with woolly hairs.

Fore Wings large, elongated, triangularly-ovate. Costal margin well arched; apical angle rounded. Apical margin entire, convex, about two thirds of the length of the costal margin. Inner margin nearly straight, three fourths of the length of the costal one. Costal vein strongly swollen at the base. Postcostal vein with its first branch arising just before the anterior extremity of the discoidal cell; the second, third, and fourth branches arising at equal distances apart; the second at a considerable distance beyond the cell. Upper disco-cellular vein nearly obsolete, arising at about half the length of the wing: middle disco-cellular curved towards the base of the wing: lower disco-cellular much longer, nearly continuous with the middle one, and united to the third branch of the median vein at a short distance beyond its origin; this latter vein is moderately swollen at its base, the submedian vein being simple.

Hind Wings triangularly ovate. Costal margin rounded, as well as the outer margin, which is entire. Inner margin slightly emarginate towards the extremity. Costal vein extending to about two thirds of the length of the costa. Postcostal vein arising just opposite to the precostal one; its branch arising at a considerable distance from the base. The upper disco-cellular vein arising at a short distance from the origin of the branch, oblique, slightly curved: outer disco-cellular longer, also oblique, and very slightly curved; uniting with the third branch of the median vein at a little distance beyond its base.

Fore Legs of the male extremely minute, hirsute, concealed among the hairs of the breast. Coxa long; remainder forming a very small oval articulated mass, much shorter than the coxa. *Fore Legs* of the female small, but quite distinct, several times longer than those of the male, scaly, destitute of long hairs. The tibia shorter than the femur. Tarsus about equal in length to the tibia, rather widened to the tip, articulated; the tips of the joints beneath furnished with short spines. Claws wanting.

Four Hind Legs scaly, moderately elongate and slender. The femur moderately clothed beneath with hairs. Tibiæ scaly, scarcely spined beneath; tibial spurs long. Tarsi with longer spines on the sides beneath. Ungues strong, curved, entire. Paronychiae minute.

ABDOMEN elongated, slender, rather thickened at the tip in the males.

This, like the last, is a group of small very plain-looking butterflies, for the most part natives of India and the East, distinguished by their dull uniform colours, of which brown is the most ordinary, generally variegated in the fore wings by an eye-like spot near the tip of the wing (the ocellus in *Mycæsis* being nearer the hinder angle), often bearing two minute silvery white dots; the hind wings are also generally ornamented with several smaller ocelli. On the under side the wings are paler, but the ocelli are larger, and the disc is generally completely covered with small transverse freckles. The species are at once distinguished by the situation of the branches of the postcostal vein; the first arising near the extremity of the discoidal cell, whilst the second has its origin at a considerable distance beyond the cell, and is followed at equal distances by the third and fourth branches, the last being also at an equal distance from the tip of the wing; the extremely minute size of the fore legs of the male is another distinguishing character of the species.

YPTHIMA.

1. YPTH. BALDUS.

Papilio Baldus Fabricius, *Mant. Ins.* ii. p. 34. n. 356.,
Ent. Syst. iii. pt. 1. p. 323. n. 699.; *Godart, Enc. M.*
ix. p. 551. n. 184.; *Donovan, Ins. India*, pl. 36. f. 2.
Papilio Lysandra Cramer, *Pap.* pl. 293. f. G. H.
East India, Java. B. M.

2. YPTH. NAREDA.

Satyrus Nareda Kollar in *Hugel's Reise n. Kaschmir*, p.
451.
Himalaya.

3. YPTH. PHILOMELA.

Ypthima Philomela Hübner, *Zutr.* f. 83, 84.; *E. Doubl.*
List Lep. B. M. p. 138.
Georgia, Florida (Hübner), Northern India (E. Doubl.).
B. M.

4. YPTH. ASTEROPE.

Hipparchia Asterope Klug in *Ehrenb. & Hempr. Symb.*
Phys. pl. 29. f. 11, 12. (m.) 13, 14. (f.)
Syria.

5. YPTH. NORMA.

Ypthima Norma Westwood *MS.*; *Doubl. Westw. &*
Hewitts, Gen. D. Lep. pl. 67. f. 1.
China. B. M.

6. YPTH. LAROIDES Westw.

Papilio Lara Linnaeus, *Mus. Lud. Utr.* p. 320. n. 138.,
Sp. Ins. p. 127.
Papilio Lara Donovan's *Naturalist's Repos.* ii. pt. 71.,
*Drawings in Bibl. Hope, Oxford.**
Cape of Good Hope.

7. YPTH. ARCTOUS.

Papilio Arctous Fabricius, *Mant. Ins.* ii. p. 33., *Ent.*
Syst. iii. pt. 1. p. 22. n. 696.; *Donovan, Ins. New*
Holl. pl. 24. f. 2.; *Godart, Enc. M.* ix. p. 552. n.
185.; *Boisduval, Voy. de l'Astrolabe, Entomol.* pt. 1. p.
156.
New Holland. B. M.

* Linnaeus expressly describes the hind wings as destitute of ocelli beneath, whilst Donovan's figure, copied from Jones's drawings, represents an *Ypthima* allied to *Baldus*.

8. YPTH. CORYNETES.

Satyrus Corynetes Boisduval in *Delegorgue, Voyage en Afrique*, p. 594.
Port Natal.

9. YPTH. CHENU.

Satyrus Chenu Guérin Méneville in *Delessert, Souv. Voy. Ind.* p. 77. pl. 21. f. 2.
Neelgherry Mountains.

10. YPTH. APHNIUS.

Satyrus Aphnius Godart, *Enc. M.* ix. p. 551. n. 183.
Isle of France.

Genus XXVI. CÆNONYMPHA.

CÆNONYMPHA Hübner.

CÆNONYMPHA and PHRYNE Herr. Schäffer.

CÆNONYMPHA and HYPOCYSTA Westwood MS.

SATYRUS p. Godt., Boisduval.

SATYRES DUMICOLES Duponchel.

BODY small, very hairy; wings entire, rounded; fore ones with the three principal veins swollen at the base.
HEAD rather small, clothed, especially in front, with long hairs, not forming a conical tuft.

Eyes prominent, naked.

Antennæ short, scarcely half the length of the fore wings, slender, annulated with white; terminated by an elongate ovate club, which is channelled beneath.

Labial Palpi very compressed, porrected obliquely, quite straight, and elevated to about the level of the top of the eyes, and advanced further in front than the length of the head, thickly clothed beneath with long bristly hairs set on at right angles; the terminal joint rather long, slender, acute, and much less slightly clothed with hairs.

THORAX small, very thickly hairy.

Fore Wings rather large, entire, hairy, and with long fringe. Costal margin moderately arched; apex rounded. Apical margin convex, nearly three fourths of the length of the costal. Inner margin nearly straight, about equal in length to the apical margin. Costal, median, and submedian veins equally swollen at the base. Postcostal vein with its branches free; the second arising just beyond the extremity of the discoidal cell, and the third and fourth at equal distances apart from the second and the tip of the wing. Upper disco-cellular vein very short, straight, arising at about half the length of the wing: middle disco-cellular much longer, directed towards the base of the wing, its tip curved a little outwards: the lower disco-cellular still longer, and continuous with the tip of the middle one, oblique, directed outwards, and uniting with the third branch of the median vein at about the same length from its origin as the length of the outer disco-cellular itself, and rather shorter than the space between the first and second branches of the median vein.

Hind Wings triangularly ovate, hairy; fringe long. Outer margin very convex and entire. Inner margin generally emarginate towards the extremity. Costal vein not extending half the length of the costa. Postcostal vein arising much nearer the body than the precostal, branching at a considerable distance from its base. Upper disco-cellular arising at a short distance from the base of the branch, curved: outer disco-cellular considerably longer, oblique; uniting with the third branch of the median vein at a distance from its origin about equal to two thirds of the space between the first and second branches of the median vein; closing the discoidal cell in a rather acute point near the middle of the wing.

Fore Legs of the male small, very densely hairy. Femur and tibia of nearly equal length. Tarsus not quite half the length of the tibia, simple. Fore Legs of the female longer than those of the male, very slender. Tibia longer than the femur, moderately hairy. The tarsus equal in length to the tibia, very slender, articulated, not dilated at the tip; the joints with very minute spines at the extremities beneath. Ungues wanting.

Four Hind Legs moderately long, scaly. Femur slightly clothed beneath with hairs. Tibiæ armed beneath at the sides with moderately long and acute bristles; tibial spurs long. Tarsus long, armed beneath and at the sides with rather long bristly hairs. Ungues acute, curved, entire.

ABDOMEN moderately long and slender.

CATERPILLAR glabrous, shining, marked with dark-coloured longitudinal stripes; tail forked.

CHRYSLIS short, thick, obtuse, attached by the tail.

This genus comprises the smallest species of the present family, which are distinguished by the strongly swollen condition of the base of the three principal veins of the fore wings, the entire margin of all the wings clothed with long fringe, the place of insertion of the second

branch of the postcostal vein of the fore wings, the eyes naked, the colours generally uniform fulvous or brownish ochre, with a more or less distinct eyelet near the tip, and another more rarely near the hinder angle of the fore wings, and the hind wings with a broad whitish irregular bar beyond the middle on the under side, followed by a row of small ocelli, or simple small pale dots, which are succeeded in some of the species by a silver submarginal line. *C. Tircis* *Cram.* (*Phryne* *Pall.*) differs from the other species in having the inner margin of the hind wings near the anal angle rounded, and not emarginate, as in the others; on which account *H. Schäffer* has separated it generically, under the name of *Phryne*. The Australian species, *C. Irius*, differs in the more elongated and triangular form of its wings, and the consequently greater elongation of the discoidal cell in each. There are some curious varieties, as they appear to me to be, of this species in the collection of the British Museum. I had on this account intended to have separated this and the allied *C. Euphemia*, also from New Holland, as a distinct genus, under the name of *Hypoecysta*, but see no other sufficient ground for keeping them apart from the rest of the genus.

The Caterpillars of *C. Iphis*, *Ascanius*, and *Pamphilus* have been figured by *Hübner* and *Godart*. That of *C. Pamphilus* feeds upon *Cynosurus cristatus*, and is found at the beginning of May and August; it is greenish, with a dusky line down the back, and a pale one on each side. The Larva of *C. Iphis* feeds upon grasses, and that of *C. Ascanius* upon *Melica ciliata* and other grasses.

CÆNONYMPHA.

1. CÆN. ŒDIPUS.

Papilio Œdipus Fabricius, Ent. Syst. iii. pt. 1. p. 218. n. 681.; Hübner, Europ. Schmett. Pap. f. 702, 703.; Ochsenh. Schm. v. Europ. i. p. 315., iv. p. 23.; Godart, Enc. M. ix. p. 544. n. 169., Léop. de France, ii. t. 19. f. 5, 6.; Boisdual, Ind. Meth. p. 33.

Pap. Pylarge Hübner, Europ. Schm. Pap. f. 245, 246.; Illiger, Mag. iii. p. 202.

Var. Pap. Miris Fabricius, Ent. Syst. Suppl. v. p. 429. n. 693, 694.

Pap. Iphigenus Herbst, Schm. t. 198. f. 5—8.

Pap. Geticus Esp. Schm. t. 102. Cont. 57. f. 2.; 107. Cont. 62. f. 5.

Central Europe, Sweden.

B. M.

2. CÆN. HERO.

Papilio Hero Linnæus, Faun. Suec. ii. n. 1047., Syst. Nat. ii. p. 793. n. 255. (but not of Fabricius); Hübner, Europ. Schm. Pap. f. 252, 253. 849, 850.; Ochsenh. Schm. v. Europ. i. p. 313., iv. p. 23.; Godart, Enc. M. ix. p. 544. n. 170.; Boisdual, Ind. Meth. n. 368.; Stephens, Ill. Haust. i. p. 63. n. 18.; Curtis, Brit. Ent. t. 205.

Papilio Sabæus Fabricius, Syst. Ent. p. 530., Ent. Syst. iii. pt. 1. p. 222. n. 694.

France, Germany, Sweden, Lapland, (England?) B. M.

3. CÆN. IPHIS.

Papilio Iphis Wiener Verz. p. 321. n. 25.; Hübner, Eur. Schm. Pap. f. 249—251. larvæ, Nymph, F. c. f. 2. a. b.; Ochsenh. Schm. v. Europ. i. p. 310. n. 69.; Godart, Enc. M. ix. p. 545. n. 171.; Léop. de France, ii. t. 20. f. 3, 4.; Boisdual, Ind. M. n. 269.

Papilio Hero Fabricius, Ent. Syst. iii. pt. 1. p. 223. n. 695. (but not of Linnæus).

Papilio Tiphon Esper, Schm. t. 35., Suppl. p. 11. f. 3, 4.

Papilio Amyntas Poda, Mus. Græc. p. 79. n. 52.

Papilio Glycereon Bork, Schm. i. p. 90. and 243. n. 27.

Maniola Manto Schrank, Fauna Boica, ii. p. 180. n. 1313.

France, Germany.

B. M.

4. CÆN. ASCANIUS.

Papilio Ascanius Linnæus, Faun. Suec. ii. n. 1045., Syst. Nat. ii. p. 791. n. 242.; Fabricius, Ent. Syst. iii. pt. 1. p. 221. n. 692.; Hübner, Eur. Schm. Pap. f. 240—242. larvæ, Nymph, F. c. fig. 1. a., Suppl. (H. Schöff.) f. 186, 187.; Schummel in Beitr. Ent. Bresl. 1829, t. 9. f. 4—7. (hybrid); Ochsenh. Schm. v. Eur. i. p. 317., iv. p. 24.; Curtis, Brit. Ent. pl. 205.; Steph. Ill. Haustell. i. p. 69.; Godart, Enc. M. ix. p. 546. n. 172., Léop. de France, i. t. 8. f. 3.

Papilio Amyntas Scopoli, Entomol. Carniol. p. 174. n. 457.

Papilio Tullius Müller, Faun. Friedl. p. 36. n. 332.

Papilio Naidon Borkh. Schm. Eur. i. p. 91.

Europe.

B. M.

5. CÆN. ASCANIOIDES.

Satyrus Ascanioides Pierret in Ann. Soc. Ent. de France, vi. p. 306. pl. 12. f. 5.; Freyer, N. Beitr. t. 457. f. 1. (See Ent. Zeit. vi. p. 359.)

Barbary.

6. CÆN. PHILEA.

Papilio Philea Hübner, Eur. Schm. Pap. f. 254, 255.; Godart, Enc. M. ix. p. 547. n. 174., Léop. de France, ii. t. 20. f. 1, 2.; Boisdual, Ind. Meth. n. 271.

Pap. Satyrion Esper, Schmett. t. 122. Cont. 77. f. 2.; Ochsenh. Schm. v. Eur. i. p. 322. n. 174.; H. Schäffer, Suppl. Hübner, Eur. Schm. Pap. f. 289, 290.; Freyer, N. Beitr. pl. 367.

Alps, Germany.

B. M.

7. CÆN. AMARYLLIS.

Papilio Amaryllis Herbst, Schm. t. 186. f. 1, 2., viii. p. 35.; H. Schäffer, Suppl. Hübner, f. 188, 189. 287, 288. (fem.); Eversmann in Nouv. Mém. Soc. Imp. Nat. Mosc. ii. p. 350. tab. xx. f. 5, 6., Bull. Nat. Mosc. 1837, n. 1. p. 18.; Freyer, N. Beitr. pl. 283. f. 3, 4.

Ural, South Russia.

8. CÆN. CORINNA.

Papilio Corinna Hübner, Europ. Schm. Pap. f. 536, 537.; H. Schöff. Suppl. f. 285, 286.; Ochsenh. Schm. v. Eur. i. p. 223. n. 75., iv. p. 23.; Freyer, Beitr. pl. 68. f. 2.; Boisdual, Ind. Meth. n. 273.

Satyrus Corinus Godart, Enc. M. ix. p. 540. n. 173., Léop. de France, ii. t. 20. f. 7, 8.

P. Norax Bonelli in Mem. Acad. Torino, xxx. t. 2. f. 2.
Sardinia, Corsica.

B. M.

9. CÆN. DORUS.

Papilio Dorus Esper, Schm. t. 78. Cont. 28. f. 1.; Ochsenh. Schm. v. Europ. i. p. 320., iv. p. 24.; Godart, Enc. M. ix. p. 547. n. 175., Léop. de France, ii. t. 20. f. 5, 6.; Boisdual, Ind. Meth. n. 274.

Pap. Dorion Hübner, Europ. Schm. Pap. f. 247, 248.

Pap. Lizetta Cramer, Pap. t. 323. fig. F. G.

Pap. Hannibal Herbst, Schm. viii. p. 48.

Pap. Dorilis Borkhausen, Eur. Schm. i. p. 93. n. 31.

Pap. Palemon Ernst, Pap. Eur. i. pl. 68., Suppl. 14. f. 57. a. b.

South of France, Portugal.

B. M.

10. CÆN. THYRSIS.

Satyrus Thyrsis Fridvaldsky MS.; Freyer, N. Beitr. pl. 475. f. 1.; H. Schöff. Suppl. Hübner, Eur. Schm. Pap. f. 297—300.

Crete.

11. CÆN. LEANDER.

Papilio Leander Fabricius, Ent. Syst. iii. pt. 1. p. 222. n. 693.; Esper, Schm. i. t. 89. Cont. 39. f. 5.; Ochsenh. Schm. v. Eur. i. p. 309., iv. p. 23.; Freyer, Beitr. pl. 110. f. 1.; Godart, Enc. M. ix. p. 548. n. 176.; Duponchel, Léop. de France, Suppl. i. t. 33. f. 5, 7.; Boisdual, Icon. Hist. pl. 45. f. 7, 8.

- Papilio Amaryllis* Cramer, *Pap.* pl. 391. f. A. B.?
Pap. Clite Hübner, *Europ. Schm. Pap.* f. 526, 527. 747, 748., *Suppl.* (H. Schöff.) f. 184, 185.
Pap. Philaidilis Borkhausen, *Eur. Schm.* t. p. 93. n. 32. Hungary, Russia. B. M.
- 12 CÆN. DAVUS.
Papilio Davus Fabricius, *Gen. Ins.* p. 259. (1776), *Ent. Syst.* iii. pt. 1. p. 221. n. 690.; *Ochsenh. Schm. v. Eur.* i. p. 302., iv. p. 23.; *Stephens, Ill. Haust.* i. p. 67. t. 7. f. 1—3.; *Westw. & Humphr. Brit. Butt.* t. 21. f. 6, 7.; *Godart, Lép. France*, ii. p. 155. t. 21.
Papilio Hero De Geer, *Mem.* ii. t. 2. f. 4. (not of Linn.)
Papilio Philoxenus Esper, *Schm. t. 54. Cont. 4. f. 3.*
Papilio Tullia Hübner, *Eur. Schm. Pap.* f. 243, 244.; *Illiger, Mag.* iii. p. 205.; *Müller Faun. Fr.* p. 36.?
P. Musarion Borkhausen, *Eur. Schm.* f. 92. n. 30.
P. Laidion Borkhausen, *Eur. Schm.* i. p. 91. n. 29.
P. Tiphon *Naturforsch.* vi. p. 15. n. 1.
Maniola Tiphon Schrank, *Fauna Boica*, ii. p. 1. 179. n. 1311.
Papilio Typhon Haworth, *Prodr.* p. 2., *Lep. Brit.* p. 16.
Papilio Polymeda Jermyn, *Brit. Butt.* p. 47.
Papilio Polydama Haworth, *Lep. Brit.* p. 16.; *Stephens, Ill. Haust.* i. p. 147. t. 7. f. 3.
Papilio Iphis Borkhausen, *Rhen. M.* i. p. 241.
Hipparchia Iphis? *Steph. Haust.* i. p. 64.
Germany, Lapland, England. B. M.
- 13 CÆN. DEMOPHILE.
Hipparchia Demophile Freyer, *N. Beitr.* t. 439. f. 3, 4.
An var. H. Davus.
Lapland.
- 14 CÆN. ISIS.
Satyrus Isis Zetterstedt, *Ins. Lapp.* p. 905. n. 16.; *Thunberg, Diss. Ins. Su.* ii. p. 30.; *H. Schöff., Suppl. Hübner, Schm. Eur. Pap.* f. 293—296.
Erebia Davus var. β . Dalman *Pap. Su.* p. 83. 14.; *Ochsenh. Sch. v. Eur.* i. p. 302. 65. var.
Lapland.
- 15 CÆN. CALIFORNIA.
Cænonympha California Westw. MS.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 67. f. 2.
California. B. M.
- 16 CÆN. PAMPHILUS.
Papilio Pamphilus Linnæus, *Syst. Nat.* i. p. 472. (1758), ii. p. 791. n. 239. (12th ed.); *Fabricius, Ent. Syst.* iii. pt. 1. p. 221. n. 691.; *Lewin, Brit. B.* t. 23. f. 1—4.; *Ochsenh. Schm. v. Eur.* i. p. 305., iv. p. 23.; *Stephens, Ill. Haust.* i. p. 69.; *Godart, Enc. M.* ix. p. 549. n. 179., *Lép. de France*, i. t. 8. f. 3.
Papilio Nephela Illiger, *Mag.* iii. p. 199.; *Borkhausen, Eur. Schm.* i. p. 87.; *Hübner, Eur. Schm. Pap.* f. 237—239.
Papilio Menalcas Scop. *Ins. Carn.* n. 458.; *Poda, Mus. Græc.* p. 78.
France, Spain, England, Lapland. B. M.
- 17 CÆN. LYLUS.
Papilio Lyllus Esper, *Schm. t. 122. Cont. 77. f. 1.*; *Ochsenh. Schm. v. Eur.* i. p. 307., iv. p. 23.; *Godart, Enc. M.* ix. p. 548. n. 178., *Pap. Fr.* ii. t. 20. f. 9, 10.; *H. Schöff., Syst. Bearb.* p. 83.; *Freyer, N. Beitr.* pl. 499. f. 1.
Pap. Pamphile Hübner, *Eur. Schm. Pap.* f. 557, 558.; *H. Schöff., Suppl.* f. 430, 431.
Sat. Pamphilus var. *Boisduval, Ind. M.* p. 33. n. 277.
South of France, Spain.
- 18 CÆN. SUNBECCA.
Hipparchia Sunbecca Eversmann in *Bull. Soc. Imp. Nat. Mosc.* 1843, p. 538. pl. 7. f. 4. a. b.
Ural Mountains.
- 19 CÆN. PHRYNE.
Papilio Phryne Pallas, *Reise*, i. p. 470. n. 60.; *Hübner, Europ. Schm. Pap.* f. 200, 201. (fem.) 708, 709. (male); *H. Sch. Suppl.* f. 106, 107.; *Esper, Schm. t. 89. Cont. 39. f. 3, 4.*; *Ochsenh. Schm. v. Eur.* i. p. 256.
Pap. Phryneus Fabricius, *Ent. Syst.* iii. pt. 1. p. 222. n. 697.; *Godart, Enc. M.* ix. p. 529. n. 119.; *Duponchel, Pap. Fr. Suppl.* i. t. 33. f. 1—4.; *Boisduval, Icon. Hist.* pl. 45. f. 4—6.
Pap. Tircis Cramer, *Pap. t. 373. f. D. E.*; *Herbst, Schm. t. 183. f. 7, 8.*
Phryne Tircis H. Schöff., *Syst. Bearb.* p. 90.
Eastern and Southern Russia. B. M.
- 20 CÆN. MAGUS.
Papilio Magus Fabricius, *Ent. Syst.* iii. pt. 1. p. 223. n. 700.; *Jones, Icones*, iv. tab. 33. f. 1.; *Godart, Enc. M.* ix. p. 551. n. 182.
—?
- 21 CÆN.? DORYCUS.
Satyrus Dorycus Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1. p. 152.; *Guérin, Voy. Coquille, Zoologie*, p. 280.
Satyrus Duponchelii Guérin, *Voy. Coquille, Atlas, Ins.* pl. 17. f. 3.
Dory, New Guinea.
- 22 CÆN. CYAMITES.
Satyrus Cyamites Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1. p. 152.; *Guérin, Voy. Coquille, Zoologie*, p. 280.
Satyrus Bazochii Guérin, *Voy. Coquille, Atlas, Ins.* pl. 14. bis f. 3.
Dory, New Guinea.
- 23 CÆN. MEHADEVA.
Satyrus Mehadewa Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1. p. 151.
New Guinea.
- 24 CÆN. MANIPA.
Satyrus Manipa Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1. p. 150.
Amboyne, Bourou, Offack.
- 25 CÆN. SHIVA.
Satyrus Shiva Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1. p. 149.
Dory, New Guinea.
- 26 CÆN. SIRIUS.
Papilio Sirius Fabricius, *Syst. Ent.* p. 488., *Ent. Syst.* iii. pt. 1. p. 220. n. 688.; *Donovan, Ins. New. Holl.* pl. 28. f. 3.; *Boisduval, Voy. de l'Astrolabe, Entom.* pt. 1. p. 148.; *Godart, Enc. M.* ix. p. 500. n. 83.
New Holland.
- 27 CÆN. IRIUS.
Papilio Irius Fabricius, *Syst. Ent.* p. 487., *Ent. Syst.* iii. pt. 1. p. 158. n. 487.; *Donovan, Ins. N. Holl.* pl. 28. f. 1.; *Godart, Enc. M.* ix. p. 548. n. 177.; *Boisduval, Voy. de l'Astrolabe, Entomol.* pt. 1. p. 155.
Neonympha Adiante Hübner, *Zutrage*, f. 545, 546.
New Holland. B. M.
- 28 CÆN. EUPHEMIA.
Hypocysta Euphemia West. MS.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 67. f. 3.
New Holland. B. M.

Genus XXVII. **CALISTO** *Hübner*.SATYRUS p. *Godt*.

BODY small, rather robust, hairy; wings rather large, dull-coloured; the anal angle of the hind wings in the typical species produced into a large rounded lobe.

HEAD rather small, hairy, not furnished with a frontal tuft.

Eyes prominent, hairy.

Labial Palpi slightly porrected, not extending so far in front as the length of the head, and with the tip elevated a little above the level of the top of the eyes. Middle joint long, much curved, rather thickly swollen, and thickly clothed in front with rather short scaly hairs; middle of the inner edge with an elongated tuft of short hairs, set on obliquely; terminal joint small, very slender, and scarcely hairy.

Antennæ short, not half the length of the fore wings, slender; terminated by a short, distinct, very compressed, pear-shaped club, concave on the inside.

THORAX oval, very hairy, especially behind.

Fore Wings moderate-sized. Costal margin very much arched; apical angle scarcely rounded. Apical margin almost straight, or but very slightly convex, entire. Inner margin nearly straight, longer than the apical. The disc in the males marked in the middle with a large rounded patch of raised silken scales, occupying almost one third of the disc of the wing. Costal vein strongly dilated at the base. Postcostal vein with all its four branches free; the first arising at some distance beyond the anterior extremity of the discoidal cell, followed at equal distances apart by the three following branches. Upper disco-cellular vein extremely short: middle disco-cellular long; the anterior half rather curved, and directed transversely across the wing, suddenly angulated in the middle; the outer half running longitudinally, and forming, as it were, the basal portion of the lower discoidal vein: lower disco-cellular vein short, transverse, closing the discoidal cell transversely rather beyond the middle of the wing; uniting with the third branch of the median vein at a greater distance from the origin of the latter than exists between the first and second branches of the median vein, which latter is swollen at the base. Submedian vein not dilated.

Hind Wings large, rounded outwardly, entire. The anal angle produced into a large rounded lobe, the inner margin being considerably emarginate near its extremity; the lobe marked with a small subocellated spot. Costal vein curved, reaching to about two thirds of the length of the costa. Postcostal vein arising just opposite to the precostal, branching at a short distance from its base. Upper disco-cellular vein long, arising at a short distance beyond the branching of the subcostal vein, very strongly curved from the base to the middle of its length, beyond which it is nearly straight, forming, as it were, the base of the discoidal vein: lower disco-cellular vein much shorter, oblique, nearly straight; closing the discoidal cell in a not very acute point; uniting with the third branch of the median vein at a shorter distance from its base than exists between the first and second branches.

Fore Legs of the male very small. Coxa long, thickly hairy. Femur and tibia short, rather thick, of nearly equal length, also thickly hairy. Tarsus longer than the tibia, slender, also thickly clothed on the outside with long hairs, exarticulate, and destitute of claws.

Four Hind Legs rather short and slender. Tibiæ but very slightly spined beneath; tibial spurs long. Tarsus armed beneath with longer and more numerous spines; the terminal joint very short. Ungues strong, irregularly curved, acute at the tip, not bifid. Paronychiae very thin, hirsute; outer lobe slender; inner lobe shorter, more triangular. Pulvillus large.

ABDOMEN small.

The hairy eyes, the dilatation of the base of the costal and median veins of the fore wings, the insertion of all the branches of the postcostal vein beyond the extremity of the discoidal vein, the strongly angulated middle disco-cellular vein, and the lobed hind wings, at once distinguish this genus, which is very limited in the number of its species, which are apparently confined to Central America and the West Indian Islands. The type is remarkable for having a large iridescent silken patch in the middle of the wings of the male; other specimens, however, of larger size, destitute of this patch, appear to offer no difference in the structure of the fore legs above described. The typical species, represented in our plate, has the under side brown of varied shades, marked with dark lines running across the wings; the fore ones with a large eye near the tip, and the hind ones with a smaller eye towards the anal angle. Mr. Gosse states that this insect is to be met with very commonly in the sombre shade of the woods of Jamaica, where it is very widely dispersed, and occurs throughout the year, its flight being slow and feeble.

CALISTO.

1. CAL. ZANGIS.

Papilio Zangis Fabricius, Syst. Ent. p. 486., Ent. Syst. iii. pt. 1. p. 218. n. 682.; Herbst, Pap. t. 203. f. 3, 4.; Godart, Enc. M. ix. p. 525. n. 129.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 66. f. 5. (Calisto Z.)
Papilio Agnes Cramer, Pap. pl. 325. f. A. B.
 Antilles, Jamaica, Carolina. B. M.

July 1. 1851.

2. CAL. HEROPHILE.

Calisto Herophile Hübner, Zutr. f. 269, 270.; E. Doubl. List Lep. Brit. Mus. p. 138.
 Honduras, Cuba. B. M.

3. CAL. HYSIUS.

Satyrus Hysius Godart, Enc. M. ix. p. 525. n. 131.
 North America?

Genus XXVIII. **STEROMA** *Westw. MS.*

BODY small; wings broad, all irregularly scalloped; the fore wings angulated below the apex, destitute of ocelli; but the hind pair mottled with black and silvery scales beneath.

HEAD rather wide, hairy, especially in front, where the hairs form a small loose tuft.

Eyes prominent, finely hairy.

Labial Palpi short, almost erect, the tip being elevated much higher than the level of the top of the eyes, but not porrected in front so far as the length of the head, very densely clothed with hairs, especially in front, but not forming so compressed a mass as in most of the preceding species; terminal joint small and ovate, not thickly hairy.

Antennæ not near half the length of the fore wings, slender, with the articulations not very distinct; terminated by an elongate-ovate rather slender club, gradually formed at its base, concave on its anterior or inner surface; the tip bent outwards.

THORAX elongate-ovate, moderately hairy.

Fore Wings large, broadly subtriangular. Costal margin arched, the curve strongest just beyond the middle of the wing; apical angle truncated. Apical margin about two thirds of the length of the costal, irregularly scalloped; the lower discoidal vein being produced into a prominent tooth, or conical lobe, on the margin, a little below the apex. Inner margin nearly straight, nearly as long as the costal. Costal, median, and submedian veins swollen at the base. Postcostal vein with its second branch arising just beyond the anterior extremity of the discoidal cell; the fourth branch extending to the tip of the wing. Upper disco-cellular vein very short, transverse: middle disco-cellular long, much arched, the arch being directed towards the base of the wing: lower disco-cellular shorter than the middle one, straight, and transverse; uniting with the third branch of the median vein at a greater distance from its origin than exists between the first and second branches of the median.

Hind Wings broad, subtriangularly ovate. Costal margin produced near its extremity into a broad rounded lobe. Outer margin forming a series of deep scallops; anal angle produced into a broad rounded lobe. The inner margin emarginate towards its extremity. Costal vein curved, and extending into the lobe of the costal margin, of which it follows the outline. Postcostal vein arising just opposite to the precostal one, branching at a considerable distance from its base. Upper disco-cellular arising at a short distance from the base of the branch, and nearly as long as the space between the base and branch of the postcostal vein, curved at its base: lower disco-cellular but slightly oblique, short; uniting with the third branch of the median vein at about the same distance from its base as the length of the lower disco-cellular itself.

Fore Legs of the male small, about as large as the labial palpus, very densely hairy. Tarsus about half the length of the tibia.

Four Hind Legs rather short. Femur thickly hairy. Tibiæ scaly, slightly spined at the sides beneath; tibial spurs short. Tarsi with the joints also spined at the sides and beneath. Ungues small.

ABDOMEN small and slender.

The broad wings, with their singular scalloped margin (at once recalling to mind some of the genera of Nymphalidæ), the lobe of the costal margin of the hind wings, and the short, erect, densely hairy palpi, are sufficient to distinguish the type of this genus from the rest of the family. This insect is remarkable for its uniform brownish black colour; the middle of the disc of the fore wings in the male presenting a silky kind of patch, bearing near the extremity of the discoidal cell a few long hairs. On the under side, the fore wings are uniformly paler brown, except at the tip, where they are freckled with white and black; whilst the hind ones are entirely freckled with the same colours, mingled with silver scales, of which there is a large irregular patch adjoining the costa. There are several undescribed species of this genus, natives of Bolivia, Colombia, and Venezuela; in none of them, however, are the generic characters so fully developed as in the species which we have figured, the wings being less deeply scalloped; in all, however, we find the peculiar silvery patches of the under side of the hind wings, and the dark colour of the upper surface of all the wings.

STEROMA.1. **STER. BEGA.**

Steroma Bega Westwood MS.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 66. f. 6.
Venezuela.

B. M.

Genus XXIX. **LYMANOPODA** *Westw.*LYMANOPODA and SARROMIA *Westw.* Plate LXVII.

BODY slender; wings broad, elongate-triangular, generally of uniform colours, destitute of ocelli, but marked with a few minute dots.

HEAD small, very hairy, especially in front.

Eyes prominent, finely hairy.

Labial Palpi greatly porrected, being twice the length of the head, and elevated obliquely to the level of the top of the eyes, but slightly compressed, densely clothed with long hairs to the tip; the hairs on the upper or hinder surface being rather shorter than those of the front.

Antennæ about half the length of the fore wings; composed of elongated very distinct joints, and terminated by an elongated gradually formed club, concave on its under side, and finely carinated within.

THORAX slender, moderately hairy.

Fore Wings elongate, subtriangular and broad, owing to the length of the hinder margin. Costal margin but slightly arched; apical angle rather acute. Apical margin slightly convex, nearly two thirds of the length of the costa; hinder angle rounded. Hinder margin nearly three fourths of the length of the costal. Costal vein strongly dilated at the base. Postcostal vein with the first and second branches arising before the anterior extremity of the discoidal cell, free; third and fourth branches arising beyond the cell, at an equal distance from its extremity and the tip of the wing. Upper disco-cellular vein very short, transverse, arising at about the middle of the length of the wing: middle disco-cellular of moderate length, the tip extending obliquely backwards towards the base of the wing: lower disco-cellular with its base directed still more towards the base of the wing, but forming a strong angle at a little distance from its origin (throwing off a veinlet into the discoidal cell from the angle); the extremity being directed in an oblique curve outwardly, without, however, extending further than the anterior extremity of the cell; so that the apical outline of the cell is very irregular, its extremity being united with the third branch of the discoidal cell, at a little further distance from its base than the space between the first and second branches; the third branch being obtusely angulated at the place of junction. Base of the median vein slightly swollen. Submedian vein not swollen at the base.

Hind Wings large, oval; the outer margin slightly angulated in the middle in some species; anal margin entire, and slightly convex. Costal vein scarcely extending beyond the middle of the costa. Postcostal arising just opposite to the precostal (which is nearly straight and directed outwardly); postcostal branching at a considerable distance from its base. Upper disco-cellular long, arising at a very short distance beyond the base of the branch of the postcostal; its base curved; its outer part forming, as it were, the base of the discoidal vein: lower disco-cellular short, transverse, slightly oblique; closing the discoidal cell rather beyond the middle of the wing, and uniting with the third branch of the median vein at about the same distance from its base as exists between the first and second branches.

Fore Legs (in both sexes?) extremely minute, hidden among the hairs of the breast. The coxa elongate; the femur very short, not half the length of the coxa, dilated, the tip hairy on the outside; the remainder of the foot forming an elongate-oval articulated mass.

Four Hind Legs moderately long, slender, scaly. Femur clothed beneath with long hairs. Tibia not hairy; armed with numerous rather long slender spines, scattered over the limb: tibial spurs long. Tarsus also very spiny.

ABDOMEN small, slender.

This is a very peculiar and interesting group, distinguished by the great length of the brush-like palpi, the form of the discoidal cell of the fore wings, and the singular structure of the fore legs, closely resembling that of the males of *Ypthima*. There is so much similarity in the position of the minute white spots, as well as in the colouring of the under surface of the wings of the two insects represented in Plate LXVII.* figures 6. and 7., that they have been regarded as the opposite sexes of the same species; in which case, from analogy with other butterflies in which the sexes vary in their colouring, we should be led to regard the blue individual (fig. 6.) as the male, and the brown one (fig. 7.) as the female. I have, however, found the same structure of the fore legs in both sexes, and am thence led to doubt whether these insects are not, in fact, males of two distinct species. At all events the style of colouring in figure 6. is quite unparalleled in the present family. Several species of somewhat larger size have the hind wings more decidedly angulated along the outer margin, and the middle disco-cellular vein is angulated near its extremity, the outer one being transverse.† This species I was at first disposed to regard as a distinct genus; but, as their general characters agree with the other species, I have thought it best to suppress the genus *Sarromia* proposed on Plate LXVII. The species are few in number, and are natives of Bolivia, Columbia, and the adjacent regions of America.

* Plate LXVII. has been erroneously numbered LXVI. in some impressions. It may be distinguished from the real Plate LXVI. by containing seven smaller figures instead of six larger ones.

† In other words, the lower discoidal vein in the larger species arises below, and in the smaller ones above, the angle which emits the veinlet into the discoidal cell.

LYMANOPODA.

1. LYMAN. SAMIUS.

Lym. Samius *West. MS.; Doubl. Westw. & Hewits. Gen.*
D. Lep. pl. 67. f. 6.
 Columbia. B. M.

2. LYMAN. IONIUS *Westw.*

Lym. Samius *Westw. op. cit.* pl. 67. f. 7. (An alt. sex.
 L. Samii?)
 Columbia. B. M.

3. LYMAN. OBSOLETA *Westw.*

Sarromia obsoleta Westw. olim, MS.; Doubl. Westw. &
Hewits. Gen. D. Lep. pl. 67. f. 5.
 Bolivia. B. M.

Family XI. EURYTELIDÆ.

EURYTELIDÆ *E. Doubleday, Cat. Lep. Brit. Mus.* p. 143.
 BIBLIDES *Boisduval, Sp. gén. Lép.* i. p. 167.
 BIBLIS *Godt.*

BODY moderately robust. Insects of moderate size.

HEAD moderate-sized.

Eyes generally naked (hairy in *Eurytela Hiarbas*).

Antennæ short, slender, not terminated by a decided club.

Labial Palpi generally elongate, not compressed, clothed with short hairy scales.

WINGS generally large, dentated or angulated, and not ocellated beneath.

Fore Wings with the costal vein always greatly swollen at the base. Postcostal with the first and second branches arising before the extremity of the discoidal cell; discoidal cell closed with a slender lower discocellular vein (which is sometimes, however, quite obliterated).

Hind Wings with the anal margin moderately developed, so as only to form a slight canal for the reception of the abdomen. Upper surface not, or very rarely, fasciculated in the males; discoidal cell closed by a slender lower discocellular vein, or open.

Fore Legs small. Those of the males more or less hairy, without tarsal articulations. Those of the females also small, but rather longer, and with the tarsal portion articulated; without claws. Claws of the hind legs simple.

LARVA cylindrical or spiny, or attenuated at the extremity; spiny on the head, and sometimes terminated by two anal points.

CHRYsalis with several prominences on the back; the head pointed and bifid; suspended by the tail.

This is another group which I should prefer to regard as a subfamily rather than as a separate family, its characters only appearing sufficiently strong to warrant the latter rank being accorded to it. Of these characters the elongated palpi scarcely differ from those of many of the *Nymphalidæ*, either in length or the nature of their clothing; in this latter respect they are well distinguished from the *Satyridæ*, with which, however, the strongly swollen condition of the costal vein of the fore wings seems to offer a point of connexion, although not a strong one, since we have seen that this is a character of only generic value amongst the last-named insects. The structure of the fore legs in both sexes is also almost identical with that of many of the *Nymphalidæ*; and the form of the Caterpillar and Chrysalis of *Didonis Biblis* *Hb.* (*Biblis Thadana* *Bdv.*), as represented in the Crochard edition of the *Règne Animal*, is entirely that of a *Nymphalideous* butterfly. On the other hand, the form of the Caterpillar and Chrysalis of *Melanitis undularis*, as represented by Dr. Horsfield in the Descriptive Catalogue of the Lepidopterous Insects in the Collection of the East India Company, is as entirely that of a *Satyrideous* insect. The last-named genus, however, recedes furthest from the ordinary *Eurytelidæ*, not only in the males of some of the species having fascicles of hairs on the upper surface of the hind wings, but also in their wings being furnished with a small prediscoidal cell; such as we have seen to exist in some of the *Morphidæ*.

The species are chiefly natives of the hottest regions of the world, the greater portion being inhabitants of the Old World, inhabiting the East Indies and the adjacent islands, and Tropical Africa; whilst *Didonis*, *Olina*, and *Cystineura* are the only representative groups in the New World.

The species are of moderate size, and for the most varied in their colouring, although destitute of the beautiful ocelli of many of the preceding groups.

Genus I. MELANITIS.

MELANITIS *Fabricius (Syst. Gloss.), Horsfield, Boisduval, Doubleday.*

ELYMNIA *Hübner.*

BIBLIS *p. Godt.*

BODY moderately robust, clothed with fine short woolly hairs; wings large, those of the male often tinged with a purple gloss.

July 1. 1851.

HEAD moderate-sized, finely hairy, often with small white dots on the crown, slightly tufted in front.

Eyes prominent, naked.

Antennæ much shorter than half the length of the fore wings, slender; terminated by a long, very slender, and gradually formed club.

Labial Palpi long, porrected in front as far as, or rather farther than, the length of the head, nearly straight, the tip not elevated to the level of the top of the eyes, only slightly compressed, rather thickly clothed with short adpressed hairs, the hind edge next the face with longer hairs; terminal joint small, slender, and somewhat acute at the tip.

THORAX compressed, ovate; woolly in front and behind.

Fore Wings large, triangularly oval. Costal margin well arched. Apical margin convex, waved or dentated. Hinder margin slightly dilated. Costal vein swollen at the base, not extending farther than one third of the length of the wing. Postcostal vein with the first and second branches arising before the anterior extremity of the discoidal cell; third and fourth at about the same distance apart as exists between the cell and the third branch. Upper disco-cellular vein very short, transverse, arising at about two fifths of the length of the wing; middle one much longer, oblique, its lower end directed towards the base of the wing; lower disco-cellular still longer, arched, the middle of the arch being scarcely more than one third of the length of the wing from its base, and uniting with the third branch of the median vein almost close to its origin. Submedian vein curved, following the dilatation of the inner margin.

Hind Wings large, subtriangular. Outer margin waved or dentate; the anal margin forming a moderately deep gutter. Precostal vein short, straight, nearly erect. Costal vein rather angulated at the place of insertion of the precostal vein, and also again at a little distance beyond; uniting with the costa at very little more than one fourth of its length from the base. Postcostal vein arising nearly at the base of the costal one; emitting a short branch near its base, which unites with the costal vein, forming a small closed prediscoidal cell, as in some of the Morphidæ; the ordinary branch of the postcostal vein emitted at a short distance beyond; this branch extending to about two thirds of the length of the costa. Upper disco-cellular vein short, transverse, emitted from the postcostal at a further distance from the base of its branch than exists between the base of the postcostal and its branch: lower disco-cellular arched, much longer than the upper one; uniting with the third branch of the median vein almost close to its origin (this third branch curved and extending into the most prominent tooth or scallop of the outer margin; the discoidal cell not extending farther than one third of the length of the wing, and bearing in the males a patch of long decumbent hairs).

Fore Legs of the male small, of nearly equal thickness throughout, moderately hairy. Tibia shorter than the femur, and the tarsus than the tibia; the latter exarticulate and destitute of unguis. Fore Legs of the female also small, but rather longer than those of the male. Basal joint of the tarsus more than half its length; second, third, and fourth joints short, transverse, with two minute spines at the tip of each beneath; last joint small, conical, terminated by two very minute spines.

Four Hind Legs moderately long, scaly. Tibiæ and tarsi finely spined beneath. Unguis curved, very acute, entire. Paronychia small, bifid, slender, hirsute.

ABDOMEN long, slender, thickened at the tip in the males.

CATERPILLAR cylindrical, rather attenuated before and behind. Head armed with two erect spines.

Abdomen terminated by two more elongated divergent spines.

CHRYsalis suspended by the tail, with small tubercles along the back and sides. The middle of the dorsum of the thorax-case elevated into an obtuse point. Head terminated by two conical points.

This genus contains the largest-sized insects in the present family, many of which are distinguished by the brilliant purple gloss upon the wings of the males, as well as by the patch of hairs on the disc of the hind wings near the base on the upper side. The existence of a distinct prediscoidal cell at the base of the hind wings also distinguishes these insects from the rest of the family. These characters, together with the structure of the larva, consequently indicate a stronger relation with some of the foregoing genera amongst the Morphidæ, than is possessed by the following genera. The species are natives of the East as well as of Tropical Africa.

MELANITIS.

1. MEL. LAIS.

Papilio Lais Fabricius, Spec. Ins. ii. p. 102. n. 448., Ent. Syst. iii. pt. 1. p. 58. n. 182.; Cramer, Pap. pl. 110. f. A. B.; Godart, Enc. Méth. ix. p. 326. n. 4. (Biblis L.)

Elymnias Lais Hübner, Verz. bek. Schm. n. 326.

East India, Java.

B. M.

2. MEL. UNDULARIS.

Papilio undularis Fabricius, Spec. Ins. App. p. 504., Ent. Syst. iii. pt. 1. p. 127.; Cramer, Pap. pl. 256. f. A. B.; Drury, Illustr. Exot. Ins. ii. t. 10. f. 1, 2.; Godart, Enc. M. ix. p. 326. n. 2. (Biblis N.); Horsfield, Descr. Cat. Lep. E. Ind. Co. pl. 3. f. 24. pl. 8. f. 8. (details).

Elymnias Jynx Hübner, Zutr. exot. Schm. f. 37, 38.

(Female) *Papilio Protogenia Fabricius, Ent. Syst. iii. pt.*

1. p. 117. n. 359.; Cramer, Pap. pl. 189. f. F. G.;

Godart, Enc. M. ix. p. 327. n. 5.

Elymnias Protogenia Hübner, Verz. bek. Schm. n. 323.

East India, Java.

B. M.

3. MEL. CASIPHONE.

Elymnias Casiphone Hübner (Geyer), Samml. exot. Schm. Band iii. pl. —.

Java.

B. M.

4. MEL. LEUCOCYMA.

Biblis Leucocyma Godart, Enc. M. ix. p. 326. n. 3.

Northern India, Java.

B. M.

5. MEL. DUSARA.
Melanitis Dusara Horsfield, *Descr. Cat. Lep. E. Ind. Co.*
pl. 5. f. 7.
Java. B. M.
6. MEL. PATNA.
Melanitis Patna Westw. MS.*; Doubl. Westw. & Hewits.
Gen. D. Lep. pl. 68. f. 2.
East India. B. M.
7. MEL. CERYX.
Melanitis Ceryx Boisduval, *Sp. gén. Léop. I.* pl. 5 B. f. 8.;
Expl. d. Pl. p. 3.
Mexico (an recte? Java?).
8. MEL. VITELLIA.
Papilio Vitellia Hübner, *Pap.* pl. 349. f. E. F.; Fabricius,
Mant. Ins. n. p. 48. n. 474., *Ent. Syst.* III. pt. 1. p.
115. n. 353.; Cramer, *Pap.* pl. 349. f. E. F.; Godart,
Enc. M. IX. p. 397. n. 161. (Nymphalis V.)
Dodonis Vitellia Hübner, *Verz. bek. Schm.* n. 93.
Amboyana.
9. MEL. PENANGA.
Melanitis Penanga Westw. nov. sp.†
Penang. B. M.
10. MEL. ESACA.
Melanitis Esaca Westw. nov. sp.‡
East Indies. B. M.
11. MEL. PHEGEA.
Papilio Phegea Fabricius, *Ent. Syst.* III. pt. 1. p. 132.;
Donovan, *Ins. of Ind.* pl. 31. f. 1. (edit. Westw.);
Godart, *Enc. M.* IX. p. 406. (Nymphalis? Ph.)
Melanitis Astyra Boisduval MS.
Ashanti. B. M.
12. MEL. BAMMAKOO.
Melanitis Bammakoo Westw. MS.§; Doubl. Westw. &
Hewits, *Gen. D. Lep.* pl. 68. f. 3.
Ashanti. B. M.

Genus II. DIDONIS.

DIDONIS Hübner, *E. Doubleday.*
BIBLIS p. Fabricius, Godt., Boisduval.

BODY moderate-sized; wings large, scalloped, alike in both sexes, black; hind ones with a submarginal red fascia.

HEAD moderate-sized, moderately hairy.

Antennæ not half the length of the fore wings, slender; articulations not distinct; terminated by a short and very gradually formed club, finely carinated beneath.

Labial Palpi large, porrected obliquely, the tip not elevated to the level of the top of the eyes, but slightly compressed, thickly clothed with short hairs; the middle joint on the outside with a long patch of white scales, and with a slight crest of hairs on the edge towards the face; the terminal joint differing in shape in the two sexes, being very small and knob-like in the male, but long and slender in the female, and nearly half the length of the middle joint.

Fore Wings large. Costal margin moderately arched; apical angle rounded. Apical margin convex, slightly scalloped, two thirds of the length of the costa. Inner margin subemarginate, about the length of the apical. Costal vein reaching to the middle of the costa, greatly swollen at the base. Postcostal with the first and second branches arising before the anterior extremity of the discoidal cell; third and fourth beyond it, at considerable distances apart. Upper disco-cellular vein arising at two fifths of the length of the wing, oblique, very short: middle disco-cellular scarcely longer, transverse, a little curved: lower disco-cellular nearly four times as long as the middle one, almost straight, transverse, closing the discoidal cell at a considerable distance before the middle of the wing, uniting with the median vein at a short distance before the origin of the third branch.

Hind Wings nearly circular. Outer margin deeply scalloped. Precostal vein slightly curved outwards. Costal vein extending to the outer angle of the wing. Postcostal vein arising much nearer the body than the

* M. Patna, alis supra fuscis; anticis anguloque externo posticarum violaceo-subnitidis, plagisque oblongo-triangularibus pone medium alteraque media anticarum purpureis; posticis punctis quatuor albis submarginalibus: alis infra pallide fuscis; anticis punctis tribus, posticis septem albis, harum margine externo albo irrorato. Expans. alar. antic. unc. $3\frac{3}{4}$.

† M. Penanga, alis supra nigricantibus plumbeo parum nitidis; anticis integris angulo apicali acuto, fasciaque lata obliqua pone medium alba e costa ultra medium marginis apicalis extensa; posticis vix repandis disco viridi parum nitido: alis infra fusco griseoque irroratis, basi obscurioribus; anticis macula magna triangulari pallidiori e medio costæ ad angulum apicalem extensa; posticis macula parva flava prope medium marginis costalis. Expans. alar. anticar. unc. $3\frac{1}{8}$.

‡ M. Esaca, alis integris supra nigricantibus olivaceo parum nitidis; anticis latissimis, fere recte truncatis, fascia angustiori pallide lilacina obliqua subapicali cum maculis tribus posticis marginis apicalis ejusdem coloris continua; posticis purpureo parum nitidis margine externo griseo: alis infra fuscis griseo valde irroratis; anticis ad apicem pallidioribus punctis duobus nigris, posticis serie punctorum minimorum nigrorum. Expans. alar. unc. $2\frac{1}{2}$.

§ M. Bammakoo, alis supra fuscis; anticis plaga magna irregulari obliqua pone medium maculaque obscuriori marginis interni albis; posticis pallidioribus nigro strigosis fascia lata transversa ante medium alba: alis infra fusco et lutescenti transverse strigosis, maculis albis ut in pagina superiori; anticis macula fulva in medio marginis apicalis; posticis basi fulvo nigro strigosis. Expans. alar. antic. unc. 3.

precostal; branching at a moderate distance from the base. The upper disco-cellular arising at a very little distance beyond the origin of the branch, and converted into the slightly curved base of the discoidal vein; the lower disco-cellular being obliterated, and the cell open.

Fore Legs of the male small, slender, and very hirsute; those of the female still more slender, scaly, scarcely hirsute. The tarsal portion dilated beyond the middle, where it is articulated; the joints armed beneath at the tip with several rather long spines; terminal joint minute, conical, with two terminal spines.

Four Hind Legs slender, and rather short, scaly, slightly hairy. Tibia and tarsus armed beneath and at the sides with short spines.

LARVA cylindrical, the joints rather constricted; anterior segments attenuated. The head armed with two long slender horns. Fourth segment produced above into a conical point, hairy at the tip; the other segments produced above into a small, slender, setigerous lobe. Tail not bifid.

CHRYsalis suspended by the tail. The head-case terminated in a point; the middle of the back of the thorax elevated into a conical protuberance, as well as the back of the first segment of the abdomen.

This is a genus consisting of species peculiar to Tropical America, remarkable for the peculiar character of their colouring, being of a dark brownish black, with a red submarginal band to the hind wings. The palpi of the males are remarkable, terminating in a small, globose, hairy knob; whilst the last joint in the opposite sex is nearly half the length of the long preceding joint. The open cell of the hind wings, and the want of a small pre-discoidal cell, at once separate these insects from *Melanitis*. I have followed Mr. E. Doubleday in applying Hübner's generic name of *Didonis* to this group, although Fabricius placed the type *Papilio Biblis* at the head of this genus in his *Systema Glossatorum*, in which he transposed the specific name to that of the genus. It is evident, however, from the characters which he gives, namely, the great length of the terminal joint of the palpi, and the clavate antennæ, that he could not have drawn them from the present group. The three known species so closely resemble each other, differing chiefly in the width and position of the submarginal red fascia of the hind wings, that I am tempted to consider them merely as geographical representatives of but one widely dispersed species.

DIDONIS.

1. DID. BIBLIS.

Papilio Biblis Fabricius, Syst. Ent. p. 505. n. 261., Ent. Syst. iii. pt. 1. p. 119. n. 365.; Herbst, Pap. t. 248. f. 1, 2.
Didonis Biblis Hübner, Verz. bek. Schm. n. 99., Samml. exot. Schm. Band ii. pl. —.
Papilio Hyperia Cramer, Pap. pl. 230. f. E. G.; Boisd. MS. (Biblis Hyper.)
Biblis Thadana Godart, Enc. M. ix. p. 326.; Blanch. in Lap. H. Nat. An. Art. iv. p. 445. pl. 18. f. 1.; Boisd. in Cuv. Règne An. ed. Crochard. Ins. pl. 136. f. 3. (4. 4 a. Larva and Pupa).
 Brazil, West Indies.

B. M.

2. DID. AGANISSA.

Biblis Aganissa Boisduval, Sp. gén. Léop. 1. pl. 9. f. 7.
 Mexico (Java Boisd. op. cit. Expl. d. Pl. p. 3.).

B. M.

3. DID. PASIRA.

Didonis Pasira E. Doubl. MS.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 31. f. 2.
 Guiana.

B. M.

Genus III. CYSTINEURA.

CYSTINEURA Boisduval, E. Doubleday.

PANTOPORIA p. Hübner.

ARGYNNIS p. Ménétries.

NYMPHALIS p. Godt.

BODY small, slender; fore wings elongate-triangular; hind ones rather short.

HEAD nearly as wide as the thorax, not tufted in front.

Eyes large, prominent, naked.

Labial Palpi slender, porrected obliquely, nearly straight, advancing in front more than the length of the head, and elevated to about the middle of the eyes, finely hairy to the tip; middle joint with a slight crest next the face.

Antennæ not quite half the length of the fore wings, slender, annulated with white; terminated by a distinct elongated club, obtuse at the tip, concave beneath within, and finely carinated.

THORAX very small, oval.

Fore Wings large, elongate-triangular. Costal margin slightly arched; apical angle rounded. Apical margin

convex, about two thirds of the length of the costal, very slightly scalloped. Hind margin equal in length to the apical. Costal vein dilated at the base. Postcostal branching as in the two preceding genera. Upper disco-cellular nearly obsolete: middle disco-cellular short, transverse, arched: lower disco-cellular much longer, transverse, but slightly curved; closing the discoidal cell considerably before the middle of the wing, by its junction with the median vein exactly at the origin of its third branch.

Hind Wings broadly triangular-ovate, short, regularly scalloped along the outer margin; the anal margin scarcely forming a gutter. Precostal vein erect, forked at the tip. Costal vein extending to the outer angle of the wing. Postcostal vein arising considerably nearer the base of the wing than the precostal vein; branching at a moderate distance from its base. The upper disco-cellular vein forming the almost straight base of the discoidal vein, and arising exactly at the base of the branch; the lower disco-cellular vein being obsolete, and the discoidal cell open.

Fore Legs of the male very minute, scaly. The femur elongated, cylindrical. Tibia and tarsus together forming a spindle-shaped mass, not more than half the length of the femur; the tarsus being about half the length of the tibia, pointed, and destitute of claws. *Fore Legs* of the female nearly three times the length of those of the male, slender, scaly. Tibia and tarsus of equal length, the latter rather dilated near the tip; the joints spined beneath. Claws wanting.

Four Hind Legs very slender, rather long, scaly. Tibia and tarsus of nearly equal length, armed beneath with a few sharp spines. Claws curved, acute, simple.

ABDOMEN long and slender.

This genus consists of a few delicately formed butterflies, natives of the hottest parts of America, not remarkable for their brilliancy of colours, but presenting several structural peculiarities of considerable interest; especially the place of insertion of the disco-cellular vein of the hind wings at the base of the branch of the postcostal vein, the curious form of the fore legs of the male, and the slender body. The characters of the genus are drawn from the species figured, which was found by Mr. Gosse very abundantly in Jamaica, especially in places of low or but moderate elevation, where it is numerous at all seasons. It flies low, alighting but little, proceeding with a dancing or jerking motion over the herbage with no great rapidity.

CYSTINEURA.

1. CYST. MARDANIA.

Papilio Mardania Cramer, Pap. pl. 213. f. F. G.; E. Doubl. List Lep. B. M. p. 144.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 31. f. 1.

Pantoporia Mardania Hübner, Verz. bek. Schm. n. 388.

Papilio Hersilia Fabricius, Ent. Syst. iii. pt. 1. p. 247. n. 770.; Godart, Enc. M. ix. p. 434.

Guiana, Jamaica.

B. M.

Nymphalis Hersilia Godart, Enc. M. ix. p. 434. n. 267.

Cystineura Hersilia Boisduval, Spec. gén. Lép. i. t. 9. f. 1.

Brazil and Northern parts of South America.

B. M.

3. CYST. TELEBOAS.

Argynnis Teleboas Ménétries in Nouv. Mém. Soc. Nat. Moscou, tom. iii. n. 28. t. 10. f. 5.

Antilles.

B. M.

2. CYST. HYPERMNESTRA.

Mnestra Hypermnestra Hübner, Samml. exot. Schm. Band ii. pl. —.; E. Doubl. List Lep. Brit. Mus. p. 144. (Cystineura H.)

4. CYST. TELETUSA.

Argynnis Teletusa Godart, Enc. M. ix. p. 817.

Brazil.

Genus IV. OLINA.

OLINA *E. Doubleday.*

NYPHALIS *p. Godt.*

Body rather long and slender; wings elongate, black, with large white spots beneath, varied with fulvous strigæ, forming large oval or circular marks on the hind wings.

HEAD small, finely hairy, not tufted.

Eyes moderate-sized, naked.

Labial Palpi moderately elongate, not elevated to the level of the top of the eyes, finely hairy.

Antennæ shorter than half the length of the wings, terminated by an elongated very slender club.

THORAX oval, banded with white scales.

Fore Wings large, elongate-triangular. Costal margin slightly curved, nearly straight in the middle; apical angle rounded. Apical margin entire, very convex, about two thirds of the length of the costa. Inner margin nearly straight, about as long as the apical. Costal vein much swollen at the base; branches of the postcostal as in the preceding genera. Upper disco-cellular very minute, oblique: middle disco-cellular short, very much arched: lower disco-cellular either entirely obsolete (*O. Azeca*), or very slender, transverse, slightly curved, and directed towards the base of the wing, uniting with the median vein about half way between the first and

second branches (O. Emilia); the discoidal cell being open in the former species, but imperfectly closed in the latter at about one third of the length of the wing.

Hind Wings broadly subtriangular-ovate. Outer margin entire, scarcely scalloped. Costal vein extending to the outer angle of the wing. Precostal vein short, erect, slightly curved. Postcostal vein branching at a moderate distance from the base. The upper disco-cellular vein short, branching off very close to the origin of the branch of the postcostal, forming the slightly curved branch of the discoidal vein: the lower disco-cellular either obsolete (O. Azeca), or very slender, and uniting with the median vein at a little distance before the origin of the third branch (O. Emilia).

Fore Legs of the male very minute and slender. Tibia and tarsus clothed with long hairs.

In their peculiar colouring, especially on the under surface of the wings and the fasciated bodies, the few butterflies composing this genus bear a certain resemblance to some of the species of *Limenitis*; whilst their elongated fore wings give them an apparent relation to the *Heliconiidae*. I regret that the only specimens I have seen of this genus are in so imperfect a state, that I can give but the preceding short generic character. The two species, O. Azeca and O. Emilia, although agreeing in general appearance and colouring, differ from each other in the condition of the discoidal cell in both pairs of wings; it being entirely open in the former, whereas it is closed in the latter. The lower disco-cellular vein, in all the wings of the latter species, is, however, much more slender than in the preceding or following genera, where it occurs.

OLINA.

1. OLINA AZECA.

Olina Azeca Doubl. MS.; Doubl. Westw. & Hewits. Gen.
D. L. pl. 31. f. 3.
Bolivia. B. M.

2. OLINA EMILIA.

Nymphalis Emilia Cramer, Pap. pl. 223. f. E. F.; Godart,
Enc. M. ix. p. 433.
Guiana, Brazil.

Genus V. EURYTELA.

EURYTELA Boisduval.
PRECIS Hübner.
BIBLIS p. Godt.

BODY and wings moderate-sized; the latter scalloped; fore wings angulated below the apex.

HEAD moderate-sized, with a tuft of hairs at the base of each antenna.

Eyes prominent, hairy in *E. Hiarbas* (naked in *E. Ophione*).

Labial Palpi elongated, rather slender, finely hairy, porrected further than the length of the head, and elevated to about the middle of the eyes; terminal joint about half the length of the preceding, slender.

Antennæ not quite half the length of the fore wing, slender; terminated by a slight, gradually formed, but very short club, obtuse at the tip.

THORAX of moderate size, woolly in front and behind.

Fore Wings moderate-sized. The costal margin but slightly arched; apical angle subtruncate. Apical margin scalloped, angulated below the apex at the extremity of the upper discoidal vein. The veins arranged as in *Cystineura*. Upper disco-cellular very short, rather oblique: middle disco-cellular scarcely longer, slightly curved: lower disco-cellular much longer, straight, transverse, but very slender, uniting with the median vein exactly at the origin of the third branch.

Hind Wings moderate-sized, subtriangular-ovate. Outer margin strongly scalloped. Veins arranged as in *Olina*. The upper disco-cellular vein arising very close to the base of the branch of the postcostal vein: the outer disco-cellular transverse, very slender in *E. Hiarbas*, and uniting with the median vein at a little distance before the origin of the third branch. In *E. Ophione* the outer disco-cellular is obsolete, so that the discoidal cell is open in this species.

Fore Legs of the male very slender and short. The femur very delicately hairy. The tibia and tarsus of equal thickness, and of nearly equal length, being together about one fourth longer than the femur. *Fore Legs* of the female considerably longer than those of the male, but equally slender. Tarsal portion dilated into an elongate-oval mass, with the three intermediate joints armed at the tip within with a pair of long sharp spines; terminal joint very small and oblique.

Four Hind Legs rather short, thickly scaly. Tibia armed beneath with rows of short spines. Tarsus more thickly clothed beneath and at the sides with rows of short spines. Claws small, curved, acute, simple. *Paronychiae* very slender, bifid; the outer division almost setaceous.

This is a genus chiefly composed of African species, generally of black colours varied with white spots on the wings, thus closely resembling some of the species of *Limenitis* and *Neptis*, from which, however, they may at once be known by the dilated condition of the base of the costal vein of the fore wings. There is considerable difference in the form of the wings of the various species; the type, *E. Hiarbas*, having the fore wings angulated, whilst they are simply scalloped in *E. Ophione*. On the under side the wings of *E. Hiarbas* are pale brown, considerably varied with chestnut-coloured markings, edged with fine lines of greyish scales, and with the white fascia of the upper sides reproduced beneath. The under side of *E. Ophione* resembles the upper, except that the ground colour of the wings is pale greyish brown, with the base of the fore wings more varied with white spots, and all the wings marked beyond the middle with a row of round black spots.

EURYTELA.

1. EUR. DRYOPE.

Papilio Dryope Fabricius, Spec. Ins. II. p. 107. n. 469.,
Ent. Syst. III. pt. 1. p. 146. n. 793.; *Cramer, Pap.*
pl. 78. f. E. F.; *Godart, Enc. M.* IX., *Suppl.* p. 824.
n. 5—6 b.

Precis Dryope Hübner, Verz. bek. Schm. n. 275.
Congo, Ashanti, Guinea, Madagascar.

B. M.

2. EUR. HIARBAS.

Papilio Hiarbas Drury, Ill. III. t. 14. f. 1, 2.
Papilio Hiarba Fabricius, Ent. Syst. III. pt. 1. p. 128. n.
391.; *Jones, Icones*, v. t. 79. f. 2.; *Donovan, Ins. of*
India, pl. 32. f. 3.; *Godart, Enc. M.* IX., *Suppl.* p.
824. n. 5—6 a.; *Doubl. Westw. & Hewits. Gen. D.*
Lep. pl. 31. f. 4.

Ashanti, Sierra Leone, Caffraria.

B. M.

3. EUR. ETHOSEA.

Papilio Ethosea Drury, Ill. III. t. 37. f. C. D.; *Godart,*
Enc. M. IX. p. 235. n. 17. (*Acræa Eth.*)

Ashanti, Guinea.

B. M.

4. EUR. OPHIONE.

Papilio Ophione Cramer, Ins. t. 114. f. E. F.

Neptis Ophione, antè, p. 272. (cum synonymis).

Eurytela Morgani E. Doubl. MS.; *Doubl. Westw. &*
Hewits. Gen. D. Lep. pl. 31. f. 5.

Western Africa, Sierra Leone, Cape Palmas.

B. M.

5. EUR. VALENTINA.

Papilio Valentina Cramer, Ins. t. 327. f. C. D.
Neptis Valentina, antè, p. 272.

Guinea.

6. EUR. FULGURATA.

Libythea fulgurata Boisduval, Faun. Ent. Madag. p. 52.
pl. 8. f. 5.

Madagascar.

7. EUR. HORSFELDII.

Eurytela Horsfieldii Boisd. in Faun. Ent. Madag. &c.
p. 54.

Java.

8. EUR. STEPHENSII.

Eurytela Stephensii Boisd. in Faun. Ent. Madag. &c.
p. 55.

Java.

Genus VI. ERGOLIS.

ERGOLIS *Boisduval.*

ELYMNIAS p. *Hübner.*

BIBLIS p. *Godt.*

ARIADNE *Horsfield.*

BODY moderate-sized; wings large, broad, thickly ornamented above with numerous slender, dark, undulating lines.

HEAD small, clothed with short scaly hairs.

Eyes moderate-sized, naked.

Labial Palpi porrected, but slightly curved, extending considerably beyond the length of the head, and not elevated above the middle of the eyes; the terminal joint a little deflexed at the tip, parallel, finely hairy beneath, the upper edge with a ridge of short hairs from the middle to the end; terminal joint elongate-oval, slender.

Antennæ slender, about two fifths of the length of the fore wings; terminated by a very slight and gradually formed club, obtuse at the tip, and not more than double the thickness of the basal part of the antennæ.

THORAX oval, woolly in front.

Fore Wings large, well arched along the costal margin. Apical margin irregularly waved, about two thirds of the length of the costal. Inner margin nearly straight, about one fourth longer than the apical, so that the wing appears nearly truncate at the tip. Veins arranged nearly as in the preceding genera. The costal dilated at the base. The upper disco-cellular very short, oblique; the extremity of the discoidal vein extending into the most prominent of the angulations of the fore wings: lower disco-cellular considerably longer, curved at its base; its extremity directed outwards longitudinally, forming the base of the lower discoidal vein: lower disco-cellular vein very slender, nearly transverse, uniting with the third branch of the median vein just beyond its origin, closing the discoidal cell at about one third of the length of the wing.

Hind Wings very broad. Outer margin scalloped. Precostal vein rather oblique, branching at its extremity. Costal vein extending to the outer angle of the wing. Postcostal arising half way between the body and the precostal vein, branching at a moderate distance from the base. Upper disco-cellular vein arising quite close to the origin of the postcostal branch, forming the very slightly curved base of the discoidal vein: lower disco-cellular vein nearly straight, slightly oblique, uniting with the median vein close to the origin of its third branch, closing the discoidal cell at about one third of the length of the wing.

Fore Legs of the male very minute and slender, but slightly and finely hairy. Tarsal portion scarcely half the length of the tibia, simple, exarticulate, and destitute of terminal unguis or spines. *Fore Legs* of the female somewhat longer than those of the male. Femur rather shorter than the tibia and tarsus united. Tibia and tarsus of nearly equal length, slender, cylindrical, scaly; the tarsus scarcely dilated at the extremity, where it is articulated; the joints with very short spines at their extremity beneath.*

Four Hind Legs rather short, slender, scaly. Tibia almost destitute of short spines beneath. Tarsus more thickly armed with rows of spines at the sides and beneath. Ungues very slender, curved, and entire.

CATERPILLAR rather short, cylindrical, rather attenuated in front. Head armed with two long setose spines. Segments of the body armed with fascicles of short setæ, or with small setigerous tubercles, variegated with spots and oblique stripes of different colours.

CHRYSALEIS rather elongated. Head-case obtusely pointed; thorax-case with an obtuse tubercle on the back; base of the dorsum of the abdomen with a larger obtuse tubercle.

The very broad form of the wings (the anterior pair appearing almost transversely truncate), and the slender undulating black streaks with which they are adorned on both sides, at once distinguish the species of this genus. On the under surface the spaces enclosed between each pair of dark streaks is of a richer hue than the ground colour of the wings. In their structural generic characters they are, however, very closely allied to the preceding and following genera.

We are indebted to the assiduous researches of Dr. Horsfield, whilst in Java, for a knowledge of the transformations of *Erg. Coryta*, the larva of which, as described above, and as figured by Dr. Horsfield, approaches very closely to those of several genera of Nymphalidæ, especially *Epicalia*, *Gynæcia*, and *Myrcelia*; indeed the larva of the species to which Cramer, with a singular coincidence, applied the name of *Ariadne* (and of which the transformations are given by Stoll, *Suppl. Cram.* pl. 4. fig. 4. A. B.), is quite like that of *Ergolis Coryta*. It will be seen, by referring back to p. 226., that the relations of *Myrcelia* are by no means satisfactory, and a detailed examination of the arrangement of the wing-veins of these and allied genera will, I feel convinced, either prove the impropriety of the adoption of the present as a distinct family, or will render the admission of other genera, which have already been arranged with the Nymphalidæ, necessary.

ERGOLIS.

1. *ERG. ARIADNE*

Papilio Ariadne Linnaeus, *Syst. Nat.* ii. p. 778. n. 170., *Amæn. Acad.* vi. p. 407. n. 71.; *Fabricius, Syst. Ent.* p. 507. n. 267.; *Godart, Enc. M.* ix. p. 327. n. 6. (*Biblis* Ar.)

Papilio Merione Cramer, *Pap.* pl. 144. f. G. H.

Elymnias Ariadne Hübner, *Verz. bek. Schm.* n. 328.

East India. B. M.

2. *ERG. CORYTA*.

Papilio Coryta Cramer, *Pap.* pl. 86. f. E. F.

Ariadne senior Horsfield, *Descr. Cat. Lep. E. Ind. Co.* t. 6. f. 2. pl. 7. f. 6. (details).

Java. B. M.

3. *ERG. TAPROBANA*.†

Ergolis Taprobana Westw. *MS.*; *Doubl. Westw. & Hewits. Gen. D. L.* pl. 68. f. 4.

Ceylon. B. M.

4. *ERG. ENOTHREA*.

Papilio Enothrea Fabricius, *Ent. Syst.* iii. pt. 1. p. 59. n. 183.; *Cramer, Pap.* pl. 237. f. A. B.; *Jones, Icones*, v. t. 98. f. 1.; *Godart, Enc. M.* ix. p. 315. n. 42.

(*Vanessa* En.); *Donovan, Nat. Repos.* pl. 37. f. 2.

Elymnias Enothrea Hübner, *Verz. bek. Schm.* n. 327.

Var. ? *Papilio Ariadne* Drury, *Ill.* iii. pl. 11. f. 3, 4.

Sierra Leone, Ashanti, Congo. B. M.

5. *ERG. ALPHÆA*.

Papilio Alphæa Drury, *Ill.* iii. pl. 36. f. 3, 4.

Sierra Leone.

Genus VII. HYPANIS.

HYPANIS Boisduval, E. Doubleday.

BIBLIA p. Hübner.

BIBLIS p. Godt.

Body slender, moderately woolly; wings of moderate size, of a rich orange colour above with black markings, but not ocellated, alike in both sexes.

* Dr. Horsfield's figures of the fore legs of this genus (*Descr. Cat. Lep.* pl. 7. f. 6. c. and f.) do not give a precise idea of their structure, the tarsus of the male and the femur of the female being represented as articulated.

† *Alis omnibus fere integris; supra rufo-fulvis, strigis numerosis tenuissimis undulatis nigris, dimidio externo posticarum concolori, haud strigoso, anticis absque puncto ordinario subapicali albo; alis infra obscurioribus, piceo-castaneis certo situ purpureo parum nitidis; apicibus omnium paullo pallidioribus et obscure strigosis, margine anali fasciis rudimentalibus.* *Expans. alar. antic. unc. 2½.*

HEAD rather small, finely hairy in front.

Eyes prominent, naked.

Antennæ short, scarcely half the length of the fore wings, slender; joints indistinct, not annulated, with pale scales; terminated by a rather long gradually formed club, formed of very short joints, obtuse at the tip, which is curved outwards.

Labial Palpi elongate, rather slender, not compressed, finely hairy, porrected considerably further than the length of the front of the head; the terminal joint horizontally porrected, not elevated above the level of the middle of the eyes; middle joint with a small conical tuft of hairs in the middle, next the face.

THORAX rather small, woolly in front.

Fore Wings of moderate size, subtriangular. The costal margin moderately arched; apical angle rather rounded. Apical margin about two thirds of the length of the costal, convex, very slightly scalloped. Inner margin nearly straight, rather longer than the apical. Costal vein dilated at the base. Postcostal with its branches arising as in the preceding genera. Upper disco-cellular very short, oblique: middle disco-cellular considerably longer, less oblique, slightly curved: lower disco-cellular much longer, transverse, the lower extremity curved a little outwards; uniting with the median vein at the origin of its third branch, and closing the discoidal cell at two fifths of the length of the wing.

Hind Wings subtriangularly ovate. Outer margin scalloped. Anal margin forming only a slight gutter for the reception of the abdomen. Precostal vein curved, slightly furcate at the tip. Costal vein extending to the outer angle of the wing. Postcostal vein branching at a moderate distance from the base, followed quite closely by the upper disco-cellular vein, which forms the slightly curved base of the discoidal vein: lower disco-cellular very slender, strongly arched; uniting with the median vein at a little distance in advance of the origin of its third branch, and closing the discoidal cell at about one third of the length of the wing.

Fore Legs of the male very small, slender, and delicate, very slightly and finely hirsute. The femur rather longer than the tibia. Tarsus rather more than half the length of the tibia, quite simple, and destitute of articulations and claws, or terminal spines. Fore Legs of the female half as long again as those of the male, slender, scaly, and destitute of hairs; the proportions of the different parts as in the male. The tarsal portion as thick as the tibia, slightly dilated towards the tip, and armed with three pairs of short spines, indicating the second, third, and fourth articulations.

Four Hind Legs moderately long and slender; the spines on the under side of the tibia and tarsus rather stronger and more numerous than in most of the preceding genera of this family. Claws strong, simple, entire.

Paronychialia very small.

ABDOMEN very slender.

This is a group of small extent, consisting of a few species, natives of the hottest regions of Asia and Africa, distinguished at once by their style of colouring and markings, which on the under side are still more varied than above, especially on the hind wings, the basal half of which is of a paler fulvous tint, thickly spotted with black. As regards their structural peculiarities I find but little to separate them from Eurytela or Ergolis.

HYPANIS.

1. HYP. ILITHYIA.

Papilio Ilithuia Fabricius, *Sp. Ins.* t. 2. p. 97., *Ent. Syst.* iii. pt. 1. p. 131. n. 403.; *Cramer, Pap.* pl. 213. f. A. B. 214. C. D.; *Godart, Enc. M.* ix. p. 327. n. 7. pars; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 68. f. 1.

Biblis Ilithyia Hübner, *Ferz. bek. Schm.* n. 228.

Sierra Leone, Congo, East India.

B. M.

Biblis Ilithyia Godart, *Enc. M.* ix. p. 327. n. 7. pars.
Southern Africa, Congo. B. M.

3. HYP. ANVATARA.

Hypanis Anvatara Boisd. *Lép. Madag.* &c. pl. 7. f. 5.
Madagascar.

2. HYP. POLINICE.

Papilio Polinice Cramer, *Pap.* t. 375. f. G. H.; *Boisduval, Sp. gén. Lép.* i. t. 9. f. 6.
Papilio Ilithyia Drury, *Ill.* ii. t. 17. f. 1, 2.

4. HYP. ? PHORCYS.

Papilio Phorcys Fabricius, *Ent. Syst.* iii. pt. 1. p. 80. n. 248.; *Jones, Icones*, iii. pl. 78. f. 1.; *Donovan, Ins. of Ind.* pl. 33. f. 2.; *Godart, Enc. M.* ix. p. 372.
"In Indiis" (Fabricius).

Family XII. LIBYTHEIDÆ.

LIBYTHEIDÆ *E. Doubleday.*

LIBYTHIDES *Boisdual.*

LIBYTHEIDES *H. Schäffer.*

HYPATI SEVERI *Hübner, Verz. b. Sch. p. 100.*

BODY robust, small.

Labial Palpi extraordinarily elongated, densely clothed with short hairs, porrected horizontally.

Antennæ short, gradually incrassated from the base to the tip.

Fore Wings strongly angulated below the apex; discoidal cell in all the wings closed by a very slender vein.

Fore Legs short. Those of the males brush-like, with exarticulate tarsi. Those of the females with ordinary-formed tarsi.

CATERPILLAR cylindrical, not spined, slightly pubescent.

CHRYsalis short, not angulated, suspended by the tail.

This family consists of only a single genus.

Genus I. LIBYTHEA.

LIBYTHEA *Fabricius, Syst. Gloss. ; Latreille, &c.*

HECAERGE *Hübner.*

BODY robust, thickly clothed with soft woolly hairs, rather small in size, and of dark colours; the wings with spots of orange, or dirty white, but not ocellated.

HEAD small, strongly tufted in front.

Eyes prominent, naked.

Labial Palpi extraordinarily elongated, being one third, or even in some species half, the length of the whole body; porrected horizontally, not compressed, thickly clothed with hairs of moderate length, the inner edges uniting together, so as to form conjointly a long conical beak, obtuse at the tip; second joint oval; third joint greatly elongated and slender.

Antennæ not nearly half the length of the fore wings, straight, articulations indistinct, gradually thickening from the base to the tip, which is obtuse.

THORAX oval, hairy; tippets strongly developed.

Fore Wings of moderate size. Costal margin moderately arched; apex acute. Apical margin strongly angulated below the apex; the lower discoidal vein extending into the most prominent part of the angle, about five sixths of the length of the costal margin. Inner margin straight, one fourth longer than the apical margin. None of the veins dilated at the base. Costal vein extending to about half the length of the costa. Postcostal vein with the first and second branches free, arising before the anterior extremity of the discoidal cell; third branch arising far beyond the cell, followed at a short distance by the fourth, which extends to the tip of the wing. Upper disco-cellular vein very minute and sub-oblique; middle and lower ones of nearly equal length, very slender, and uniting into a curve, closing the discoidal cell about the middle of the wing, by uniting with the third branch of the median vein at about the same distance from its base as exists between the first and second branches.

Hind Wings irregularly and broadly ovate. The costal margin produced in the middle into a considerable-sized lobe. Outer margin strongly scalloped. Anal margin forming only a slight gutter for the reception of the abdomen. Precostal vein short, curved outwards. Costal vein extending to the outer edge of the lobe, of which it follows the outline. Postcostal vein arising just opposite to the precostal, branching at a considerable distance from its base. Upper disco-cellular vein rather short, almost transverse, arising at a distance from the base of the postcostal branch about equal to the space between the base of the postcostal and its branch. Lower disco-cellular slender, but distinct, more oblique than the upper disco-cellular, and slightly curved, closing the discoidal cell* by its union with the third branch of the median vein at a very short distance from its origin; this third branch considerably curved after its union with the lower disco-cellular vein.

Fore Legs of the male small and brush-like, densely hairy. The tarsus rather shorter than the tibia, cylindrical, exarticulate, and destitute of unguis. *Fore Legs* of the female considerably longer than those of the male, but articulated like the four hind feet. The tarsus armed with short spines beneath. The unguis curved, dilated at the base, horny, acute at the tips. Paronychia slender, membranous, bifid, finely setose; the outer division acute, the inner one shorter and more triangular. Pulvillus broadly transverse, the base narrowed.

Four Hind Legs moderately elongated, thickly clothed with scales. Femur hairy beneath. Tibia and tarsus armed beneath with short spines. Unguis and their appendages formed exactly as in the fore legs of the female.

ABDOMEN small, slender.

CATERPILLAR rather slender, subcylindrical, destitute of spines or points. Tail simple. Body finely pubescent, and very delicately shagreened, with pale longitudinal stripes at the sides, very closely resembling those of the Pierides.

CHRYSLIS short, suspended by the tail. Thorax-case rather gibbose in the centre of the back. Head-case not produced into a beak.

The peculiar structure of the fore legs of this genus separates it from all the preceding genera, being imperfect and brush-like in the males, but articulated and furnished with claws and their appendages in the females, exactly as in the tarsi of the hind feet. In other respects, if we except the gradually clavated straight antennæ and the elongated palpi, we find no character of importance to remove this genus from the Nymphalidæ or Eurytelidæ. The structure of the paronychia, and the arrangement of the veins of the wing, offer no distinction; but the larva is entirely like those of the Pierides, whilst the chrysalis is simply suspended by the tail. If, therefore, we regard this last-named character as the primary principle of classification of the Diurnal Lepidoptera, we have here a genus which belongs to the great group having the chrysalis suspended. Its larva, however, evidently points out an affinity with the Pierides; whilst the structure of the feet, and the want of ocellated spots on the wings beneath, seem equally to point to the Lycænidae. In the arrangement of Dr. Boisduval, in which the Lycænidae and Erycinidæ are introduced immediately after the Papilionidæ, the Libythides are placed at the end of the second section "Suspendus," immediately preceding the Hesperides. I cannot but think this arrangement less natural than that which is adopted in the present work; Dr. Boisduval having, as it appears to me, placed too great importance on the perfect state of the fore legs in both sexes of the Lycænidae, and in the females of the Erycinidæ, which, in conjunction with the girt chrysalis, has led him to unite them with the Papilionidæ.

It is interesting to find so remarkable a genus as the present possessing so wide a geographical range. Species from Europe, Asia, and America have been already described, and I am here able to add a new species from Sierra Leone.

LIBYTHERA.

1. LIB. MYRRHA.

Lib. Myrrha Godart, *Enc. M.* ix. p. 171. n. 4.; Hübner, *Zutrage exot.* Schm. f. 789—790.; G. R. Gray, *Lep. Ins. of Nepaul*, pl. 1.; Boisduval, *Sp. gén. Lép.* i. pl. 10. f. 8.
Nepaul, India, Java. B. M.

pl. 108. f. E. F.; Fuessly, *Archiv.* ii. t. 8. f. A. B. (ed. Gall.); Godart, *Enc. M.* ix. p. 178. n. 3.
Surinam. B. M.

2. LIB. NARINA.

Lib. Narina Godart, *Enc. M.* ix. p. 171. n. 5.
Java.

4. LIB. LABDACA nov. sp.†

Lib. Labdaca Westw. *MS.*; Doubl. Westw. & Hewits. *Gen. D. L.* pl. 68. f. 6.
Sierra Leone. B. M.

3. LIB. CARINENTA.

Papilio Carinenta Fabricius, *Spec. Ins.* ii. p. 104. n. 455.,
Ent. Syst. iii. pt. 1. p. 139. n. 428.; Cramer, *Pap.*

5. LIB. MOTYA.

Libythea Motya Boisduval & Leconte, *Icon. Lép. et Chen. Amér. Sept.* t. 64.
Heacerge Motya? Hübner, *Samml. exot. Schm.* Band .
pl. —.
United States. B. M.

* Boisduval (*Sp. gén. Lép.* i. p. 167.) inaccurately describes, and H. Schaffer (*Syst. Bearb.* pl. 5. f. 6.) figures, the discoidal cell of the hind wings of this genus as open.

† Lib. alis supra fuscis, anticarum punctis tribus subapicalibus alterisque quatuor discoidalibus obscurioribus; posticis macula costali fasciaque subobsoleta media obscure albis: alis subtus multo pallidioribus; anticis basi fulvidis apice griseo irrorato; posticis albido fuscoque marmoratis, fascia abbreviata basali alteraque media pallidioribus: palpis mediocriter elongatis. *Expans. alar. antic.* $2\frac{1}{2}$ unc.

6. LIB. CELTIS.

Papilio Celtis Fabricius, Mant. Ins. t. 2. p. 56. n. 556., Ent. Syst. iii. pt. 1. p. 140. n. 430.; Esper, Pap. pt. 1. p. 168. t. 87. Cont. 37. f. 2, 3. p. 85. t. 109. Cont. 64. f. 2—8. (larva and pupa); Fuessl. Arch. ii. t. 14. a. b. c.; Hübner, Schm. Eur. Pap. f. 447—449.; Ochsenh. Schm. Eur. i. pt. 2. p. 192.; Godart, Enc. M. ix. p. 170. n. 1.; Boisduval in Cuvier, Règne An. (ed. Crochard) Ins. pl. 136. f. 1, 2.
 South of France, Italy, Spain. B. M.

7. LIB. TERENA.

Lib. Terena Godart, Enc. M. ix. p. 170. n. 2. and p. 813.
 Antilles.

8. LIB. GEOFFROYI.

Lib. Geoffroyi Godart in Mém. Soc. Linn. Paris, ii. Lép. pl. 2., Enc. Méth. ix. n. 813.
 Java.

Family XIII. ERYCINIDÆ.

ERYCINIDÆ p. *Swainson*,
ERYCINIDÆ *Boisduval*.
NAPÆÆ RURALES *Hübner*.

BODY generally slender. Insects of small size.

HEAD small, not or scarcely tufted in front.

Eyes almost always naked.

Antennæ generally short and slender, occasionally furnished with short scaly hairs at the end of the joints.

Labial Palpi generally extremely small and slender, scarcely advanced in front of the face as seen from above; the last joint nearly naked.

WINGS variable in form, colour, and markings, but not ornamented with ocellated spots; generally of large size, in proportion to the size of the body; (expanded when at rest. *Swainson*.)

Fore Wings generally with only three branches to the postcostal vein; the first and second arising before the extremity of the discoidal cell, and the third far beyond the cell. The upper disco-cellular vein obliterated.

The upper discoidal vein arising at or near the origin of the second postcostal branch. Discoidal cell closed by very slender middle and lower disco-cellular veins, only visible on denuding the wing of its scales.

Hind Wings very variable in form. The discoidal cell closed by very slender upper and lower disco-cellular veins. Anal margin forming a slight gutter for the reception of the abdomen.

Fore Legs small and slender. Those of the males smaller than those of the females, brush-like; the tarsal portion forming an exarticulate mass, destitute of claws at the tip. Those of the female longer, slender, scaly; tarsus articulated, with the joints longer and more distinct than in the Nymphalidæ and Satyridæ.

Hind Legs slender, scaly. Spurs short. Terminal claws very minute, scarcely exerted.

CATERPILLAR short (but scarcely onisciform), with tufts of short hairs, or lateral fleshy appendages; the segment behind the head in some species furnished with a pair of erect spines.

CHRYSLIS short, not angulated, setose, attached by a thread across the body; obtuse at each extremity.

This is an extensive family of delicately formed butterflies, chiefly found in Tropical America, although some of the aberrant forms are natives of Africa and Asia, and one even inhabits Europe. They are of small size, and extremely varied in their forms, representatives of many of the remarkable forms of other families occurring amongst the species of the present family. Thus, some of them resemble the tailed species of Papilionidæ and Nymphalidæ; others the elongated-winged Heliconiæ; others the blue and copper-coloured species of Lycaenidæ; and some the dusky and spotted Hesperidæ. Structurally, these insects are distinguished from the preceding by the more delicate form of their bodies, the more varied style of their markings, and the short contracted caterpillars and chrysalides, the latter being girt across the body. The fore wings appear generally to possess only three branches to the postcostal vein; the antennæ are very slender, and the palpi very short, although in a few species they are almost as long as in the Libytheidæ.

The flight of these insects, according to M. Lacordaire, is very rapid, and the majority of the species rest with their wings extended on the under side of leaves, after the manner of many of the Geometrideous moths, to which, indeed, some of the species bear a striking resemblance, in colour, size, form, and markings. M. Boisduval introduces into the present family the genus *Nemeobius* of Stephens (*Hammaris* p. *Hübner*), the type of which is the *Papilio Lucina* of Linnæus, an extremely interesting British species, differing in many important respects from the family Nymphalidæ, in which it was arranged by Stephens, with the remark, however, of its varying therefrom in several respects. It is true that the general appearance, colours, and markings of this butterfly seem to indicate a relation with Melitæa (in which genus also an allied Indian species has recently been placed by Kollar); but the ambulatory fore feet of the females, the minute simple unguis, the posterior tibiæ destitute of spurs, the short, broad, elongate-ovate larva, and the girt chrysalis, are characters indicating a much closer relation to the typical Erycinidæ.

We unfortunately possess but very few illustrations of the transformations of the butterflies of this family, and it is to Stoll that we are indebted for most of our materials in this respect, his observations having been made upon the species of Surinam. The two species of *Helicopsis* (*H. Cupido*, and *Gnidus*, or *Endymion*) possess nearly similar larvæ, having a large red head, with the body short, cylindrical, narrowed before and behind, and thickly clothed with white hairs; the chrysalis is also short and destitute of angulations; the body being also setose; the caterpillar of the former species feeds on the orange and cotton trees, and that of the latter on the passion flower. The chrysalis is attached by the tail, and girt round the body. The caterpillar of *Eurygona Midas* is still shorter, with two long erect spines arising upon the segment behind the head, with a tuft of red hairs at the base; the body is also densely setose, as is also the chrysalis, although less so. It is found on grass. Among the more aberrant species whose transformations have been observed are the *Nemeobius Lucina*, above mentioned, and two species of the genus *Stalactis* of Hübner (*Nerias Boisduval*), which were described by Godart as species of *Heliconia* (to which, indeed, they bear a very great similarity in form and markings), although the former author suggested their probable generic distinction therefrom. By Dr. Horsfield, however, one of these larvæ was given (*Lep. Jap.* pl. 3. f. 18.) as an illustration of the transformations of the Heliconiæ; the genus is, however, to be referred to the present family.

This caterpillar is that of *Stalactis Euterpe*, and as figured by Stoll is of a pale green colour, with the head reddish; the eight segments of the body, after the hindmost of those which bear the true legs, are furnished on each side with a long fleshy obtuse spine-like appendage; whilst that of *Stalactis Calliope*, also observed by Stoll, has a shorter body, of a reddish yellow colour, with a black head, and a velvety black spot behind the head, and with a row of black spots down the back; the sides of the body are armed with black hairs, and the chrysalis is pale greenish, with several rows of black dots; the head is obtuse, and the body is slightly setose.

The Erycinidæ as proposed by Swainson (*Nat. Hist. Insects in Lardner's Cab. Cycl.* p. 94.) comprises not only the present family, but also the following, Lycenidæ. There appears to me, however, sufficient distinction between these two families to warrant their separation. The Lycenidæ, in fact, are powerful in their flight, whilst, to judge from the general structure of many of the Erycinidæ, we should be led to suppose that their flight was slow and irregular, like that of the Geometridæ. The very minute palpi, and the minute brush-like feet of the males, will also at once distinguish most of the Erycinidæ from the Lycenidæ; and the caterpillars, although short, are not onisciform, and are more or less setose. Dr. Horsfield, on the other hand, has united the Erycinidæ with the Hesperiidæ to form his Anopluriform stirps of butterflies. He even considers *Erycina*, *Emesis*, *Lemonias*, and *Eurybia* amongst the typical genera; and *Nymphidium*, *Helicopsis*, and *Barbicornis* as aberrant genera. This arrangement does not appear to me at all natural, as I can perceive scarcely any real affinity between *Erycina* and *Hesperia*. Even in respect to their metamorphoses, upon which Dr. Horsfield has chiefly relied for their supposed affinity, there seems to me to be equally strong reasons for separating these two groups; whilst the brush-like structure of the fore legs of the male indicates (notwithstanding the girt of the chrysalis) a certain affinity with the preceding families, which must be overlooked if we unite *Erycina* with *Hesperia*, or even bring them into contact. How far an arrangement of the families of butterflies, commencing with the Lycenidæ, followed by the Papilionidæ, would remedy this apparent contradiction, cannot here be discussed. It seems to me, however, that any arrangement which would widely separate the Erycinidæ from the Lycenidæ would not be a natural one.

About one hundred and fifty species of this family are described in the *Encyclopédie Méthodique*, as well as many others by Fabricius. We are acquainted, however, with more than twice that number, great additions having been made by the researches of Messrs. Bates and Wallace in South America; the British Museum alone possessing more than two hundred and fifty species. The figures of many of the species given by Cramer, and the descriptions of others by Fabricius, are not sufficiently precise, in the absence of individuals of such species, to allow of the insects being referred with precision to the modern genera described in the following pages. In many instances I have, therefore, been compelled to rely upon analogy in the colouring and markings of the species; and it will, doubtless, be found in the end that some of such species have been misplaced, although after the pains which I have taken to appropriate them, I trust that no violent inaccuracy of this kind will occur.

Genus I. EURYBIA.

EURYBIA Illiger, Godt., Hübner, E. Doubleday.

BODY moderate-sized, elongate: wings maculated, the fore ones generally with a small black spot near the extremity of the discoidal cell on both surfaces; the markings alike in both sexes.

HEAD rather broad, clothed with very short hairs.

Eyes large, naked.

Antennæ long, being nearly as long as the body, and two thirds of the length of the fore wings, slender; joints short, especially at the base, annulated with white at the tips; terminated by a short slender club, slightly incurved at the tip, channeled on the inside, and rather pointed at the tip.

Labial Palpi very small, much compressed, the hinder edge applied to the face, thickly clothed with scales; the tip elevated to about the level of the middle of the eye, and porrected only to so short a distance that the palpus is scarcely seen from above: the basal joint is very much curved; the second joint straighter, not quite three times the length of the basal joint; terminal joint extremely small, oval, concealed among the terminal scales of the preceding joint.

THORAX oval, clothed with short hairs, except at the ends of the tippets behind, where they are much longer.

Fore Wings large. Costal margin strongly arched. Apex produced into an obtuse point in *E. Carolina*, but rounded in the majority of the species. Disc generally marked with a circular black or blue spot towards the extremity of the discoidal cell. Apical margin slightly convex, entire, two thirds of the length of the costal. Inner margin nearly straight, about equal in length to the apical. Costal vein reaching to the middle of the costa. Postcostal with four simple free branches; the first and second arising near together, a little before the anterior extremity of the discoidal cell; third and fourth branches arising beyond the cell, at about the same distance apart as occurs between the extremity of the cell and the third branch, the space between the fourth branch and the apex of the wing being still longer. Upper disco-cellular vein obsolete; middle and lower ones of about equal length, slender, forming a transverse arch; upper discoidal vein arising simultaneously with the middle disco-cellular a little beyond the middle of the wing; the extremity of the lower disco-cellular uniting with the third branch of the median vein at a little distance beyond its origin; the space between the first and second branches of the median vein considerably elongated.

Hind Wings of moderate size; outer margin entire and rounded (in the majority of the species), angulated in the middle in *E. Carolina*. Precoastal vein short, rather obliquely erect. Costal vein extending to about three fourths of the length of the costa. Postcostal vein arising nearer the base of the wing than the precoastal, branching at a moderate distance from its base, the branch extending to the outer angle of the wing. Upper disco-cellular vein arising exactly opposite the branch of the postcostal, and forming the base of the discoidal vein: lower disco-cellular very oblique, about equal in length to the upper disco-cellular, very slender, but closing the discoidal cell about the middle of the wing in an acute point, by its junction with the third branch of the median vein at a short distance beyond its origin.

Fore Legs of the male small, slender, and brush-like, being thickly clothed with long soft hairs. The tarsal portion equal in length to the tibia, and destitute of joints and claws. *Fore Legs* of the female about one fourth longer than those of the male, slender, finely scaly. Tibia and tarsus equal in length to the tarsus of the hind leg. Tarsus articulated as in the hind legs, and also furnished with a pair of minute claws.

Four Hind Legs slender, scaly. Middle femur elongated, curved, and clothed beneath with rather long soft hairs. Tibia with a velvety patch on the inside near the base; tibial spurs scarcely visible. Tarsus well articulated, scaly, slightly spined at the extremity of the joints. Ungues minute, compressed, the base forming a very thin squarish lamina; the terminal portion forming an acute point nearly at right angles with the base. Paronychiae small, broad; the outer portion produced into an obtuse setose lobe, the remainder forming a rather square, slender, membranous piece, with long ciliae at the extremity, which are equal in length to the outer terminal lobe. Pulvillus broad, leathery, cordate, slightly emarginate at the sides.

ABDOMEN slender, elongated.

This genus comprises some of the largest species in the family, and which are generally of a brown colour; the base marked beyond and about the middle of the wing with various dusky spots; those beyond the middle forming a curved series, each one bearing a white patch in some of the species, and followed by a submarginal row of dark spots, preceded by paler lunules. These markings are also similarly arranged in the hind wings. The species placed at the head of the genus in the *Encyclopédie Méthodique* (*E. Carolina*) differs from the rest in the fore wings being produced into an obtuse point at the tip, while the hind wings are angulated in the middle of the outer margin; this species is also marked on the disk with orange red spots. It agrees, however, with the more numerous species in the arrangement of the veins of its wings, so as not to render necessary its separation as a distinct genus. The spot in the middle of the discoidal cell of the fore wings is of an intense blue colour in the males of some of the species; the hind wings are also beautifully glossed with the same colour in some of the species.

EURYBIA.

1. EUR. CAROLINA.

Eurybia Carolina Godart, *Enc. M.* ix. p. 459. n. 1.;
Guérin, Icon. R. An. Ins. pl. 80. f. 4., *Voy. Coquille*,
Zool. p. 282., *Atlas Ins.* pl. 14. bis f. 2.
Brazil.

2. EUR. NICÆA.

Papilio Nicæus Fabricius, *Syst. Ent.* p. 482. n. 175., *Ent.*
Syst. iii. pt. 1. p. 53. n. 163.; *Godart, Enc. M.* ix.
p. 459. n. 2. (*Eurybia N.*); *Hübner, Verz. bek. Schm.*
18. 100. (*Eurybia N.*)
Papilio Salome Cramer, pl. 12. f. G. H.; *E. Doubleday*,
List Lep. Brit. M. pt. 2. p. 1.
Guiana, Brazil. B. M.

3. EUR. DARDUS.

Papilio Dardus Fabricius, *Ent. Syst.* iii. pt. 1. p. 156. n.
482.; *Godart, Enc. M.* ix. p. 459. n. 3. (*Eurybia D.*)
Papilio Lamia Cramer, *Pap.* pl. 150. f. C.
Surinam.

4. EUR. HALIMEDE.

Eurybia Halimede Hübner, *Verz. bek. Schm.* p. 18. 101.,
Samml. exot. Schm. Bd. i. pl. —. (*Limnas Hal.*)
Bahia, Para. B. M.

5. EUR. UPIS.

Eurybia Upis Hübner, *Samml. exot. Schm.* Bd. ii. pl. —.;
Hübner, Verz. bek. Schm. p. 18. n. 102.
Pernambuco. B. M.

6. EUR. LYCISCA.

Eurybia Lycisca *E. Doubleday, List Lep. Brit. Mus.* pt. 2.
p. 1.; *Doubl. Westw. & Hewitson, Gen. D. Lep.* pl. 69.
f. 4.
Honduras. B. M.

7. EUR. TELEPHAE.

Eurybia Telephae Boisduval, *Sp. gén. Léop.* pl. 20. f. 2.
Cayenne.

Genus II. ALESA.

ALESA *E. Doubleday, List Lep. Brit. Mus.* pt. 2.
ERYCINA *Godt.*

BODY elongate, slender: fore wings elongate, with longitudinal stripes of dark and light colours at the tip, differently coloured in the two sexes; the hind ones marked with a submarginal row of large spots.

HEAD short, transverse, broader in the males than in the females, clothed with very short hairs.

Eyes rather large, naked.

Labial Palpi small, very compressed, applied close to the face: basal joint much curved; second nearly erect, scaly; third very slender, nearly naked, two thirds of the length of the second joint in the females, in which the tip of the palpi is elevated nearly to the level of the top of the eyes, but in the males it is shorter, and scarcely reaches more than half their height.

Antennæ very slender, more than two thirds of the length of the fore wings in the males, rather shorter in the females; terminating in a very slender, short, compressed club, with the tip acute and incurved; the extremity white in the males, the basal portion not annulated.

THORAX short, oval, finely hairy.

Fore Wings elongate. Costal margin slightly arched; apex obtuse. Apical margin convex (especially in the females). Veins arranged as in *Eurybia*.

Hind Wings small, subtriangularly ovate. Outer margin entire, nearly straight in the males, more convex in the females; anal angle rounded. Veins arranged as in *Eurybia*, except that the upper disco-cellular vein arises at some little distance beyond the origin of the branch of the postcostal; and the lower disco-cellular is consequently more transverse, being united to the third branch of the median vein at about the same distance from its base as exists between the base of the branch of the postcostal and the origin of the upper disco-cellular.

Fore Legs of the male small, slender, and densely hairy. *Fore Legs* of the female considerably longer, being about two thirds of the length of the middle legs, very slender, scaly. The tarsus about one third longer than the tibia, articulated as in the other legs.

Four Hind Legs rather short, slender. Tibia of the middle legs about equal in length to the femur. Femur and tibia shorter in the hind legs, but the tarsus is longer.

ABDOMEN elongate, extending a little beyond the hind wings in the male, attenuated and slightly tufted at the tip.

Like the preceding genus, the present one is distinguished from the great body of the Erycinidæ by having four free branches to the postcostal vein of the fore wings; from *Eurybia* it is distinguished, however, not only by the style of its markings, but by the greater elongation of the terminal joint of the palpi, the form of the wings, and the insertion of the upper disco-cellular vein of the hind wings at some little distance beyond the branching off of the branch of the postcostal vein.

The exquisite species represented in Plate LXX. fig. 8. has the fore wings rather less elongated, and the hind ones rather more triangular, than in the second species, *Alesa Priolas* of Godart, the male of which is of a velvety black colour on the upper side, with the apical portion of the wings dull greenish, with black veins and stripes; the hind portion of the apical margin, and the extremity of the hind wings, being of an intense purple tint in certain lights. The female, which appears to me to be certainly the *Papilio Amesis* of Cramer, is of a dull buff colour, with dark brown spots and bars on the basal half of the wings, the apical half being streaked with black in the fore wings, and bearing a submarginal row of large black oval spots on the hind wings; the under side is similarly marked, but the ground colour is paler buff, and the male is very like the female on the under side.

ALESA.

1. AL. PREMA.

Erycina Prema Godart, *Enc. Méth.* ix. p. 569. n. 27.;
E. Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 1. (*Alesa*
Pr.); *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 70.
f. 8.

Brazil.

B. M.

2. AL. SMARAGDIFERA Westw. nov. sp.*

Columbia.

B. M.

3. AL. PRIOLAS.

Erycina Priolas Godart, *Enc. M.* ix. p. 569. n. 26.; *E.*
Doubl. List Lep. Brit. Mus. pt. 2. p. 1.
(Female) *Papilio Amesis* Cramer, *Pap.* pl. 104. f. F.;
Godart, *Enc. M.* ix. p. 584. n. 98. (*Erycina* Am.)

Guiana, Brazil.

B. M.

Genus III. ZEMEROS.

ZEMEROS Boisduval, *E. Doubleday*.

HAMANUMIDA p. *Hübner*.

ERYCINA p. *Godt*.

BODY small, slender: wings large, irregular along the margins; disc marked with a number of small white dots.
HEAD small, very finely hairy; front with a small truncated tuft.

* Al. alis supra pallide fuscis, anticis supra strigis duabus, posticis tribus, anticis punctis quatuor basalibus, posticis sex subapicalibus nigris in medio smaragdinis; subtus coloribus omnino pallidioribus et obscurioribus. Expans. alar. antic. unc. 2. An Al. Premæ fœm.?

Eyes small, naked.

Labial Palpi very minute, almost horizontal, not visible from above; the tip not reaching more than the level of one fourth of the height of the eyes, rather thickly clothed beneath with hairs; the terminal joint not being visible, except on denuding the palpus.

Antennæ short, and very slender, not more than half the length of the fore wings; terminated by a short but distinct club, rather slender, obtuse at the tip; annulations very short, and finely ringed with white at the tip.

THORAX rather large, oval; tippets truncate in front, finely hairy.

Fore Wings large, broadly triangular. Fore margin slightly arched; apical angle slightly acute in the males, more obtuse in the females. Apical margin irregularly scalloped, being more convex in the females than in the males. Inner margin not so long as the apical. Veins arranged as in *Eurybia*, except that the lower disco-cellular vein is united to the third branch of the median vein quite close to its origin.

Hind Wings irregularly oval. The apical margin irregularly scalloped, and somewhat truncate from the anal angle to the extremity of the third branch of the median vein. Costal vein not extending beyond the middle of the costa. Postcostal vein arising near the body, but curved at its base, being deflexed opposite the precostal vein; branching at a considerable distance from the base, the branch extending to the upper end of the first or outer scallop. Upper disco-cellular vein short, arising a little nearer the body than the branch of the postcostal, oblique: lower disco-cellular oblique, slightly longer than the upper, uniting with the median vein exactly opposite the base of the third branch, which extends to the strongest of the angles formed by the scallops of the margin. Anal margin of the wing forming a very slight gutter for the reception of the abdomen.

Fore Legs of the male very small, and densely clothed with hairs. Tarsus simple. *Fore Legs* of the female more than twice the length of those of the male, slender, but well clothed with scales, so as to conceal the joints of the tarsus, which is about equal in length to the tibia, and is terminated by two small, distinct, very slender claws.

Four Hind Legs slender, and rather short, clothed with fine scales. Femur of the middle pair considerably elongated, being as long as the tibia and half the tarsus. Tarsus of the hind pair rather longer than the tibia.

Tibial spurs very slender, short, and acute. Tarsi armed beneath with very fine, short, acute setæ.

ABDOMEN small, slender, scarcely more than half the length of the hind wings.

The type of this genus is one of the few *Erycinidæ* natives of the East, being found in various parts of the East Indies, Java, and China. It is distinguished from the two preceding genera by the irregular margin of the wings, the subtriangular form of the anterior pair, the short antennæ, extremely minute palpi, and the peculiarities in the arrangement of the veining of the wings, as indicated in the preceding generic characters. The under side of the type is similar in its markings to the upper; the only difference being that the ground colour is somewhat of a paler orange tint.

ZEMEROS.

1. ZEM. FLEGYAS.

Papilio Flegyas Cramer, *Pap.* pl. 280. f. E. F.; *E. Doubl.*
List Lep. Brit. Mus. pt. 2. p. 1. (*Zemerus* Fl.);
Boisduval, Spec. gén. Lép. t. 21. f. 5.; *Doubl. Westw. &*
Hewits. Gen. D. Lep. pl. 69. f. 5.

Papilio Allica Fabricius, *Ent. Syst.* iii. pt. 1. p. 244. n.
761.; *Godart, Enc. M.* ix. p. 567. n. 13.; *Hübner,*
Verz. bek. Schm. p. 18. n. 105. (*Hamanumida* All.);
Donovan, Ins. of India, pl. 37. f. 2.

China, Java, East India.

B. M.

Genus IV. NEMEOBIUS.

NEMEOBIUS Stephens, *Boisduval, E. Doubleday.*

HAMEARIS p. *Hübner.*

HAMEARIS *Curtis.*

ARGYNNIS p. *Godt.*

BODY small: wings of moderate size; anterior elongate, triangular; colouring brownish black, with orange-coloured markings; the hind wings beneath with two rows of white spots.

HEAD small; clothed, especially in front, with long fine hairs.

Eyes hairy.

Antennæ slender, short, not more than half the length of the fore wings, composed of about forty joints, which

are very short, each with a slender ring of white scales at its tip; terminated by a short, distinct, ovate club, with an obtuse fleshy apex, spoon-shaped when dry.

"*Maxillæ* spiral, not more than half the length of the antennæ; a considerable portion of the apex fringed with tentacula."—*Curtis*.

Labial Palpi slender, porrected nearly horizontally, the tip extending considerably beyond the extremity of the frontal tuft of hairs, and rising to about one fifth of the height of the eyes, clothed beneath with long bristly hairs, shortening to the apex; basal joint nearly half the length of the second; third joint minute, oval, clothed with long porrected hairs.

THORAX with the tippets, collar, and metathorax very hairy.

Fore Wings somewhat elongate, triangular. Costal margin nearly straight, except at the base. Apical margin very slightly scalloped, convex. Veins arranged as in *Zemerus*, except that the lower disco-cellular vein is united to the third branch of the median vein at a little further distance from its origin than in that genus.

Hind Wings subovate, rather angulated at the anal angle. Apical margin rounded, and very slightly scalloped. Costal vein not extending beyond one third of the length of the costa. Postcostal vein with its branch arising at a considerable distance from the base of the wing, the branch extending only to about two thirds of the length of the apparent costal margin. Upper disco-cellular vein short, almost longitudinal, forming the base of the discoidal vein, arising considerably nearer the base of the wing than the branch of the postcostal vein: lower disco-cellular vein three times as long as the upper one, oblique, slightly arched, uniting with the third branch of the median vein at a very short distance beyond its origin.

Fore Legs of the male very minute, simple, and densely clothed with hairs. Femur very short, scaly, and pilose. Tibia longer, producing very long scaly hairs. Tarsus composed of a single lanceolate joint. *Fore Legs* of the female nearly three times as long as those of the male, perfect, scaly. The femur longer than the tibia. Tarsus also slightly longer than the tibia, articulated as in the hind legs.

Four Hind Legs short, scaly. Femur of the middle pair longer than in the hind pair, clothed beneath with rather long hairs. Tibial spurs very minute and slender. Tarsus armed beneath with fine spines. Claws slender, porrected, sickle-shaped, acute at the tip. Pulvillus simple and distinct.

ABDOMEN small, and of moderate length.

CATERPILLAR elongate-ovate, somewhat onisciform, hairy.

CHRYSLIS short, with the head obtuse, destitute of angulated protuberances, setose, attached by the tail, and girt round the middle of the body with a thread.

The Duke of Burgundy Fritillary (the name given by our collectors to the type of this genus) is the only European representative of the present family, and is one of the most interesting of our native insects. It is generically nearly allied to *Zemerus*; but the elongated, acute, very hairy palpi, the pilose eyes, the strongly clavate antennæ, and the curious arrangement of the veins of the hind wings, separate it from all the adjacent genera. Looking at the series of European, or, still more restrictedly, at our British, butterflies, this insect fills an important situation between the butterflies with girt chrysalides, having fully developed feet in both sexes, and those butterflies in which the fore feet of the males are brush-like, all of which inhabiting Europe have simple suspended chrysalides. This position was assigned to the genus with admirable tact by Dennis and Schiffer Müller, in the *Wiener Verzeichniss*, nearly a century ago. The following observations by Hübner on the species comprise all that is known of its habits. The eggs are found solitary, or in pairs, on the under surface of the leaves of *Primula veris* and *elatior*; they are almost globular, smooth, shining, and pale yellowish green. The Caterpillar feeds on the leaves. Its head is roundish, heart-shaped, smooth, shining, and bright; ferruginous black only on the mouth and about the eyes: its body is almost oval, but long, depressed, and set with rows of bristly warts; the other parts are clothed with feathery hairs. On the back, at least from the fourth joint to the tail, there is a black dot on each joint, and on the sides similar, but less distinct spots. The colour is pale olive brown; its feet are rusty brown; the spiracles black; claws and belly whitish. It moves very slowly; rolls itself up when disturbed, and remains in that state a long time. Soon after the middle of summer it becomes a Pupa, not only fastening its body by the apex, but also by spinning a cord about its middle. In this state it remains until the end of the following spring. The caterpillar throws off five skins before it assumes the chrysalis state, and its appearance at different ages varies considerably.

The species from India introduced by Mr. E. Doubleday with doubt into this genus, under the name of *Nemeobius*? *Demeter*, appears to me to belong to the following.

NEMEOBIUS.

1. NEM. LUCINA.

Papilio Lucinda Linnæus, *Syst. Nat.* ii. p. 784. n. 203.;
Fabricius, *Ent. Syst.* iii. pt. 1. p. 250. n. 778.; *Och.*
Schmett. v. Europa, iv. p. 14.; *Hübner*, *Schmett. Pap.*
f. 20, 21.; *Godart*, *Enc. M.* ix. p. 288. n. 57. (*Argyn-*

nis L.); *Hübner*, *Verz. bek. Schm.* p. 19. n. 128.
(*Hamearis* L.); *Curtis*, *Brit. Ent.* pl. 316.; *Stephens.*
Ill. Haust. i. p. 27. (*Nemeobius* L.); *Boisduval*, *Sp.*
gén. Lep. i. pl. 6. f. 8. (*Nemeobius* L.)

England, Germany, France.

B. M.

Genus V. TAXILA.

TAXILA *E. Doubleday (List Lep. Brit. Mus.).*EMESIS *Horsfield, Boisduval (nec Fabricius).*

BODY robust: wings large, variously shaped.

HEAD broad; front with a broad transversely truncated tuft, extending over the base of the antennæ.

Eyes generally finely hirsute.

Antennæ moderately long and slender, with short joints, the base of each slightly annulated with white; terminated by a short, broad, somewhat pear-shaped, compressed club, varying in size in the different species.

Labial Palpi short, not, or scarcely, visible in front of the face when seen from above, finely scaly; basal joint much curved, finely hairy beneath; terminal joint very small.

THORAX robust, finely hairy at the sides and beneath: wings variable in form; the fore ones often marked with oblique bars of pale colour, and the hind ones beneath with two black spots near the outer angle.

Fore Wings subtriangular, or subtriangularly ovate. Apical margin straight, or slightly convex. Apical angle rounded, or subacute. Veins nearly arranged as in *Zemeros*. The first and second branches of the postcostal vein arising before the anterior extremity of the discoidal cell, and the third and fourth at considerable distances beyond it. The upper disco-cellular vein obliterated; the middle disco-cellular and the upper discoidal veins arising together at a little distance beyond the second branch of the postcostal vein; the middle and lower disco-cellular veins forming a nearly continuous curve, the latter uniting with the third branch of the median vein at a very short distance beyond its origin.

Hind Wings very variable in form; in some species with the anal angle produced into a spatulate tail, in others with the outer margin entire, rounded, and very slightly scalloped; in others with the middle of the outer margin strongly angulated and produced into a tail-like lobe, and in others produced into several short tails. The discoidal vein scarcely extending beyond the middle of the costal margin. The branch of the postcostal vein arising considerably beyond the upper disco-cellular vein. The lower disco-cellular vein uniting with the third branch of the median vein at a short distance from its origin.

Fore Legs of the male short, slender, and very densely clothed with soft hairs, forming a thick brush. *Fore Legs* of the female twice as long, slender, scaly. The tarsus well articulated: terminal joint small, oval; armed beneath with a series of very minute spines, and at the tip with two, regularly formed, much curved unguis, acute at the tip, not above one fourth of the length of the joint. The pulvillus large and leathery.

Four Hind Legs moderately long, slender, and scaly. The femur hairy beneath. The femur of the middle pair of legs elongated. Tibial spurs very minute, or obsolete. Ungues small, very strongly curved, broad at the base, with a deep notch at the base of the apical acute portion. Paronychia very slender, obliquely truncate; the outer portion of the truncation armed with numerous long setæ. Pulvillus broad, short, dilated at the extremity.

ABDOMEN rather short.

This fine genus is nearly allied to *Hamearis*, with which it entirely agrees in the arrangement of the veins of the wings, but from which it is distinguished by the small size of the labial palpi, which are not clothed beneath to the tip as in that genus with long setæ, and by the different character of the markings, especially on the under side of the wings.

The genus embraces, in its present extent, a variety of forms, the species being, however, confined in their geographical range to Asia and Africa. Our Plate LXIX. contains representations of several of the most striking forms; namely, *Taxila Fylla* from Sylhet and Assam, with triangular fore wings and large slightly scalloped hind wings; *Taxila Egeon* from India, a species agreeing most nearly in its markings with *Hamearis*, but distinguished by the form of the wings, especially the hind pair. Of this form there are several species in our collections, some of which are recorded in the *Catalogue of the Lepidoptera of the British Museum* under the names of *Erato*, *Fatna*, and *Cesennia*. Another group, typified by *Papilio Echerius* of Stoll, has the middle of the outer margin of the hind wings angulated, with a deep emargination outside the angle. This, in the African *Hesperia Gerontes Fab.* (*Baucis Drury*), is developed into a tail, whilst the Madagascar *T. Tepahi* of Boisduval has the outer margin of the same wings deeply scalloped, with two short tails in the middle. Another Eastern group, distinguished by its large rounded wings, the hind ones but slightly scalloped, is typified by *Emesis Drupadi* of Horsfield. In our Plate LXIX. figures 6. and 7. represent both sexes of the beautiful closely allied species, *E. Orphna* of Boisduval.

As Fabricius (by whom the genus *Emesis* was proposed in the *Systema Glossatorum*) gave the *Hesperia Ovidius* as its type, I have followed E. Doubleday's views in giving the name of *Taxila* to the present group instead of employing for it the name of *Emesis*, as used by Horsfield and Boisduval, that name being restored to the genus containing *Ovidius*, for which Boisduval proposed the name of *Nymula*. This explanation is necessary, in consequence of the generic name of *Emesis* having been misapplied to *E. Orphna* in our Plate LXIX.

TAXILA.

1. TAX. DURGA.

Melitæa Durga Kollar in *Hugel's Reise d. Kaschmir, Ent.*
p. 44. pl. 13. f. 3, 4.
Nemeobius? Demeter E. Doubl. *List Lep. Brit. Mus.*
pt. 2. p. 2.
Himalaya, Simla. B. M.

2. TAX. EGEON.

Emesis Egeon Boisduval MS.; E. Doubleday, *List Lep.*
Brit. Mus. pt. 2. p. 2. (Taxila Eg.); Doubl. Westw. &
Hewits. Gen. D. Lep. pl. 69. f. 2.
Nepaul. B. M.

3. TAX. ECHERIUS.

Papilio Echerius Stoll, *Suppl. Cr.* pl. 31. f. 1. 1 A. 1 B.;
Godart, Enc. M. ix. p. 566. n. 12. (*Erycina* E.). E.
Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 3. (Taxila
Echerius).
Hesperia Coriolanus Fabricius, *Ent. Syst.* iii. pt. 1. p.
284. n. 91.; Jones, *Icones*, vi. t. 48. f. 1.; Godart,
Enc. M. ix. p. 828. n. 11—12 (*Erycina* Cor.).
Lycæna Xenodice Hübner, *Verz. bek. Schm.* p. 23. n. 174.
China and East India. B. M.

4. TAX. GERONTES.

Papilio Gerontes Fabricius, *Spec. Ins.* ii. p. 117. n. 524.
(1781).

Papilio Baucis Drury, *Ill. iii.* pt. 12. f. 3, 4. (1782).
Sierra Leone.

5. TAX. TEPAHI.

Emesis Tepahi Boisduval, *Lép. Madagascar*, pl. 3. f. 4.
Madagascar.

6. TAX. DRUPADI.

Emesis Drupadi Horsfield, *Descr. Cat. Lep. E. Ind. Co.*
t. 2. f. 3. 3 a—g.; E. Doubleday, *List Lep. Brit. Mus.*
pt. 2. p. 2. (Taxila Dr.); Boisduval, *Sp. gén. Lép.* pl. 7.
f. 2. (*Emesis* Dr.). B. M.
Penang, Java.

7. TAX. ORPHNA.

Emesis Orphna Boisduval, *Sp. gén. Lép.* pl. 21. f. 4.;
Doubleday, Westw. & Hewits. *Gen. D. Lep.* pl. 69. f.
6. (f.), 7. (m.); E. Doubleday, *List Lep. Brit. Mus.*
pt. 2. p. 2. (Taxila Or.). B. M.
Borneo, India.

8. TAX. FYLLA.

Emesis Fylla Boisduval, MS.; E. Doubleday, *List Lep.*
Brit. Mus. pt. 2. p. 2. (Taxila Eg.); Doubl. Westw. &
Hewits. Gen. D. Lep. pl. 69. f. 3.
Nepaul, Sylhet, Northern India. B. M.

Genus VI. METHONE.

METHONE E. Doubleday, *List Lep. B. M.*
HELICOPIS p. Hübner, *Verz.*
ERYCINA p. Godt.

BODY moderately robust: wings large; hind wings produced on the outer margin into a series of short tails. Female nearly similar to the male, but with paler and larger spots, and the hind wings with a submarginal row of pale round spots.

HEAD small, considerably wider in the males than in the females, hairy between the eyes.

Eyes large, naked.

Labial Pulpi very short, compressed, curved, the extremity not extending so far as the frontal hairs of the face, clothed beneath with a few moderately long hairs; terminal joint very short and somewhat conical.

Antennæ scarcely half the length of the fore wings, slender; joints very indistinct, not annulated with white; terminated by a long gradually formed but very slender club, not much thicker than the basal portion of the antennæ, obtuse at the tip.

THORAX small, ovate, hairy at the sides and behind.

Fore Wings large, triangularly ovate. Costal margin well arched; apical angle rounded. Apical margin about five sevenths of the length of the costal, entire, very convex, especially in the females. Hinder margin equal in length to the apical. Costal vein reaching to about the middle of the costa. Postcostal vein with its first and second branches arising before the anterior extremity of the discoidal cell, the third branch at more than three fourths of the length of the wing, and the fourth very near the tip. The upper disco-cellular vein is obsolete; the middle one arises about the middle of the length of the wing, half way between the second branch and the base of the upper discoidal vein, short, rather curved, and oblique; lower disco-cellular about twice as long as the middle one, carried obliquely in the same direction, and uniting with the third branch of the median vein at about the same distance from its origin as exists between the first and second branches, and closing the discoidal cell in an acute point. The upper discoidal vein arises at a short distance beyond the discoidal cell, and runs in the same direction as the basal part of the postcostal vein, of which it might, indeed, be considered as the continuation.

Hind Wings large, ovate. Costal margin arched. Hinder margin very deeply scalloped; the veins terminating in very prominent teeth between the scallops. Anal margin forming a deep groove for the reception of the abdomen. Costal vein extending to about two thirds of the costa. Precostal short, erect, its tip directed towards the body. Postcostal vein branching at a moderate distance from its base. The upper disco-cellular short, oblique, arising at about the same distance from the base of the branch of the postcostal, as its own length: lower disco-cellular much longer, less oblique, uniting with the third branch of the median vein at a short distance from its origin, closing the discoidal cell at about half the length of the wing. The third branch of the median vein extends into the most prominent of the tails of the outer margin of the wing.

Fore Legs of the male very short, but thick, and densely clothed with fine hairs. The tarsal portion about two thirds of the length of the tibia. *Fore Legs* of the female also short, thick, very scaly. The tarsal portion as long as the tibia. The intermediate tarsal joints armed beneath with moderately strong spines.

Four Hind Legs comparatively short and thick. Middle femur elongated, thickly clothed with scaly hairs. Tibial spurs apparently obsolete. Tarsal portion thickly squamose, the scales at the extremity nearly concealing the claws and their appendages.

ABDOMEN small.

The type of this genus is a Brazilian insect, agreeing with the preceding genera in having four branches to the postcostal vein of the fore wings, but distinguished by the branch of the postcostal vein of the hind wings arising nearer the base of the wing than the upper disco-cellular vein, resembling in this respect *Alesa*. The four branches of the postcostal vein will at once distinguish this genus from the following, with which it agrees in the denticulated hind margin of the hind wings. The short thick legs are also another distinguishing character of the genus. Our Plate LXIX. fig. 1. represents the male. The female is larger, with a much broader and paler oblique bar in the fore wings; and the hind wings have a row of pale yellowish spots in the broad black border.

METHONE.

1. METH. CICILIA.

- Papilio Cicilia* Cramer, *Pap.* pl. 159. f. D. E., 376. f. G. H.
Methone Cæcilia E. Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 4.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 69. f. 1.
Erycina Amyntor Godart, *Enc. M.* ix. p. 827. n. 10—11. (*Erycina* C.); *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 4. (*Methone* C.).
 (Female) *Papilio Dorine* Cramer, *Pap.* iv. p. 249. pl. 376. f. G. H., and *Syst. Syn.* p. 11.

Helicopis Cecilia Hübner, *Verz. bek. Schm.* p. 22. n. 164.
 Para, Surinam (Cramer), India (Fab.), Bengal (Cramer).
 B. M.

2. METH. ? PLAUTUS.

Hesperia ? *Plautus Fabricius, Ent. Syst.* iii. pt. 1. p. 291. n. 113.; *Jones, Icon.* vi. t. 44. f. 1.; *Godart, Enc. M.* ix. p. 828. n. 13—14. (*Erycina* Pl.).
 "In Indiis" (Fabricius).

Genus VII. HELICOPIS.

HELICOPIS *Fabricius, Syst. Gloss.*
 HEXUROPTERIS *Hübner.*
 ERYCINA p. *Godt.*

BODY slender, elongated: wings large; the hind ones produced into a series of long slender tails, and ornamented beneath with silvery spots and lines.

HEAD small, elongated behind the eyes, with an erect tuft of hairs upon the neck. Face clothed with very short hairs.

Eyes small, finely hairy.

Labial Palpi very short, compressed, curved to the tip, not arising higher than one fifth of the height of the eye.

Basal and second joints broad, of nearly equal length; the second rather attenuated at the tip; the terminal joint about one third of the length of the middle joint, ovate, pointed at the tip.

Antennæ not half the length of the fore wings, slender. The joints at the base and in the club very short; those in the middle of the antennæ greatly elongated, annulated at the base with white, and with the extremity of each slightly clavate, and occasionally clothed with fine scales. The club of the antennæ is elongate, gradually formed, and terminating in a curved acute point, being composed of very short joints, which give it somewhat of a serrated appearance.

September 1. 1851.

5 S

THORAX small, scaly.

Fore Wings large, triangularly ovate. Costal margin strongly arched; apical angle obtuse. Apical margin very convex, entire; anal angle rounded. Inner margin rather longer than the apical. Postcostal vein with only three branches: the first branch arising before the anterior extremity of the discoidal cell, its basal portion very short, oblique, being united with the costal for a short distance, when it branches off, its extremity forming, as it were, a forked continuation of the costal vein; second branch arising at a little distance beyond the first; third branch arising, in *H. Endymion*, very near the extremity of the wing; the extremity of the postcostal vein extending to the tip. Disco-cellular vein obsolete: middle disco-cellular vein of moderate length, varying in its place of insertion and direction: lower disco-cellular vein longer than the middle one, slender, closing the discoidal cell at a greater or less distance beyond the base of the third branch of the median vein.

Hind Wings large, more or less broadly ovate. Outer margin produced into a series of long slender tails; the longest (in the typical species) being traversed by the extremity of the second branch of the median vein, but in *H. Dematria* by its third branch. Costal margin slightly angulated at about two thirds of its distance from the base, at the point where the costal vein terminates. Postcostal vein branching at a considerable distance from its base, the branch extending to the outer angle of the wing. The upper disco-cellular vein arising at a little distance beyond the branch of the postcostal, almost transverse: lower disco-cellular vein rather longer than the upper one, following the same direction, and closing the discoidal cell by its union with the third branch of the median vein close to, or a little beyond, its origin.

Fore Legs of the male short, very densely clothed with fine hairs. Tibia elongated. Tarsus flattened, attenuated at the tip. *Fore Legs* of the female with the femur longer than in the male. The tibia and tarsus together about the same length, slender, finely scaly. Tarsus as long as the tibia; intermediate joints finely spined beneath; terminal joint as long as the three preceding together, armed at the tip with small claws and pulvillus. Tibial spurs apparently obsolete.

Four Hind Legs slender, scaly. Femur hairy beneath. Terminal joint of the tarsus very short.

ABDOMEN slender, elongate; thicker in the female.

CATERPILLAR with the head large; the body cylindrical, attenuated towards the tail, thickly clothed with long setæ.

CHRYsalis apparently without angular projections, setose, and attached by a girth across the body.

The elegance of the typical species of the present genus has earned for them the specific names of *Cupido* and *Endymion*; and the brilliancy of the under surface of the wings, marked with numerous patches of pearl-like silver, joined with the delicacy of their elongated tail-like projections, renders them objects of great interest to the amateur; whilst their peculiar characters, and the knowledge of their transformations, impart to them an equal interest in the mind of the professed entomologist. The curious structure of the antennæ is most fully developed in fine large males of *H. Endymion*, where the middle joints are greatly elongated, and slightly tufted at the tips, leading on to the formation so peculiar in *Barbicornis*. The veins of the wings in the two typical species exhibit some instructive variations. The junction of the first branch of the postcostal vein with the costal, from which it again branches off at a little distance, and seeming, as it were, to form the true extremity of the costal vein, is worthy of notice, as well as the variation in the place of insertion of the middle disco-cellular vein (the upper one being quite obsolete). In *H. Cupido* it arises immediately beyond the short basal part of the first branch of the postcostal vein; in *H. Endymion* at an equally short distance beyond the base of the second branch of the postcostal; whilst in *H. Dematria* it arises at a short distance beyond the base of the upper discoidal vein, so that we might typically say that in this last species the basal part of the upper discoidal vein forms the real upper disco-cellular vein. In consequence of this variation in the difference of position in the origin of the middle disco-cellular vein, the discoidal cell varies in the form of its extremity, being in *H. Endymion* oblique, the tip being at the place of junction with the third branch of the median vein; in *H. Cupido* transverse; and in *H. Dematria* oblique, but in the opposite direction.

The transformations of the species observed by Stoll have already been described in the introductory remarks on the family.

HELICOPIS.

A. Antennæ with the middle joints greatly elongated. Palpi scaly. Second branch of the median vein of the Hind Wings extending into the longest tail. Legs not tufted. (*Helicopis* proper.)

1. HEL. ENDYMION.

Papilio Endymion Cramer, *Pap.* pl. 244. f. C. D. (male) f. E. F. (fem.); Stoll, *Suppl. Cram.* pl. 4. f. 5. A. (caterpillar) 5. B. (chrysalis); E. Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 4. (*Helicopis* E.).

Hesperia Gnidus Fabricius, *Spec. Ins. App.* p. 504., *Ent. Syst.* iii. pt. 1. p. 258. n. 2.; Godart, *Enc. M.* ix. p. 563. n. 1. (*Erycina* Gn.); Hübner, *Samml. exot. Schm.* Band 1. pl. —.

Hexuropteris Endymiona Hübner, *Verz. bek. Schm.* p. 22. n. 165.

Surinam, Para.

B. M.

2. HEL. CUPIDO

Papilio Cupido Linnaeus, *Syst. Nat.* ii. p. 787. n. 217., *Mus. Ur.* p. 313.; Fabricius, *Ent. Syst.* iii. pt. 1. p. 258. n. 1.; Merian, *Ins. Surin.* t. 10.; Roesch, *Ins. Bel.* 4. t. 3. f. 7.; Cramer, pl. 164. f. D. E. (male)

F. G. (fem.); Stoll, *Suppl. Cram.* pl. 4. f. 6. A. (caterp.) 6. B. (chrysalis); Godart, *Enc. M.* ix. p. 563. n. 2.; Boisduval, *Sp. gén. Léop.* 1. t. 6. f. 13. (*Helicopis* C.)

Hexuropteris Cupidina Hübner, *Verz. bek. Schm.* p. 22. n. 166., *Samml. exot. Schm.* Band 1. pl. —.

Surinam, Brazil.

B. M.

B. Antennæ with the middle joints of moderate length. Palpi setose. Third branch of the median vein of the Hind Wings extending into the longest tail. Legs short, tufted at the base of the tarsi. (*Sarota* Westw.)

3. HEL. (SAROTA) DEMATRIA.

Helicopis Dematria E. Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 4.; Doubl. Westw. & Hewits, *Gen. D. Lep.* pl. 71. f. 10.

Honduras.

B. M.

4. HEL. (SAROTA) CHRYSUS.

Papilio Chrysus Cramer, *Pap.* pl. 380. f. D. E.; Godart, *Enc. M.* ix. p. 643. (*Polyomm.* Ch.).

An var. *H. Dematriæ*?

Surinam.

Genus VIII. BARBICORNIS

BARBICORNIS Godt., ♂c.

BODY small. Antennæ nearly filiform, clothed with setose scales. Fore wings long; hind wings small, each terminating in a long single tail.

HEAD rather small, with a small tuft in front.

Eyes moderately large, naked.

Antennæ not quite half the length of the fore wings, slender, nearly filiform, being slightly thickened towards the extremity, composed of about thirty-six joints, clothed with short setose incumbent scales.

Labial Palpi minute, nearly horizontal, the tip scarcely projected beyond the front of the eyes, compressed, clothed with fine setose hairs on the under side; terminal joint minute, and ovate-conical.

THORAX small, ovate.

Fore Wings elongate, subtriangular. Costal margin moderately arched; apical angle rounded. Apical margin very convex, entire. Inner margin straight, not so long as the apical one. Costal vein extending to the middle of the costa. Postcostal vein with three branches: the first and second arising near together at a little distance before the anterior extremity of the discoidal cell; the third branch arising at a short distance beyond the cell. Upper disco-cellular vein obsolete: middle disco-cellular arising at about the same distance beyond the second postcostal branch as exists between the first and second branches, slightly arched: lower disco-cellular vein scarcely longer than the middle one, also slightly arched; both together uniting to form a transverse termination to the discoidal cell, by the junction of the latter vein with the third branch of the median vein at a moderate distance from its origin. The upper discoidal vein arises conjointly with the middle disco-cellular, and is continued in the same direction as the base of the postcostal vein, of which it might be considered as the extremity.

Hind Wings of moderate size. Costal margin curved; outer angle strongly rounded. Outer margin produced in the middle into a long single tail (equal in length to the remainder of the wing), and traversed by the second and third branches of the median vein. Costal vein extending nearly to the extremity of the costal margin. Postcostal vein branching at a considerable distance from its base. Upper disco-cellular vein forming the curved base of the discoidal vein, which arises at a little distance beyond the branch of the postcostal, and extends to the base of the outer edge of the tail: lower disco-cellular obsolete, so that the discoidal cell is open. Postcostal vein with its first branch arising at a moderate distance from its base; third branch arising beyond the middle of the wing, and running quite close to the second branch traversing the tail. Anal angle produced into a prominent point or angle. Anal margin scarcely forming a canal for the reception of the abdomen.

Fore Legs of the male minute and densely feathered. *Fore Legs* of the female longer, scaly. The tibia and tarsus of nearly equal length, slender. Tarsus articulated as in the hind legs; the intermediate joints armed beneath with small spines; terminal joint with small claws and pulvillus.

Four Hind Legs slender, scaly. Femur beneath finely hairy. Tarsus rather longer than the tibia. Ungues very thin and square at the base, with a deep notch on the inside, and with the terminal portion forming an acute hook nearly at right angles with the base. Pulvillus large. Paronychia small, subquadrate, setose.

ABDOMEN of moderate size.

The remarkable antennæ of this genus almost filiform, and clothed with long scaly hairs, give to the insects of which it is composed a strong resemblance to some of the Heterocerous Lepidoptera; but the structure of the legs, and the arrangement of the wing veins, satisfactorily establish its affinity to the Erycinidæ. From the incorrect details hitherto published of its important organs, I have been particular in the description of those parts; thus, the veins of the wings are represented quite erroneously by M. Boisduval (*Sp. gén. Léop.* i. pl. 20. f. 3.), and in the Crochard edition of the *Règne Animal*, Insectes, pl. 143. f. 4 b. In the latter work (where, from the greater pretension given to the delineation of the essential organs of the different genera, such inaccuracy was the less to be expected) the upper and lower disco-cellular veins of the fore wings (closing the discoidal cell) are in an inaccurate position, the former arising exactly in conjunction with the upper discoidal vein, whilst the hind wings are represented as destitute of a costal vein, the precostal alone being given. The figure of the antenna given in this work is still more inaccurate, as it represents that organ as composed of only twenty-three joints, and as gradually attenuated from the sixth joint to the tip; whereas the terminal joints are the broadest, as may be learned by denuding the antenna of its scales. Except in respect to the structure of the antennæ, and the discoidal cell of the hind wings not being closed, there is scarcely any character to remove the present genus from the immediate vicinity of *Helicopsis* and *Erycina*, with which it also agrees in the peculiar structure of the claws of the feet.

The species are natives of South America.

BARBICORNIS.

1. BARB. BASILIS.

Barbicornis Basilis Godart, *Enc. M.* ix. p. 706. n. 1.; Griffith, *Animal Kingdom*, pl. 102. f. 3.; Boisduval, *Sp. gén. Léop.* pl. 20. f. 3.; Cuvier, *Règne Animal* (edit. Crochard), *Ins.* pl. 143. f. 4. 4.a. 4.b.

Brazil.

2. BARB. MONA.

Barbicornis Mona Hewitson MS.; Doubl. Westw. & Hewitson, *Gen. D. Lep.* pl. 70. f. 2.

—?

Genus IX. SYRMATIA.

SYRMATIA *Hübner, E. Doubleday.*LIMNAS *Hübner olim.*ERYCINA *p. Godt.*

BODY very small: wings large; each of the hind wings produced into a very long tail.

HEAD small, with a slight frontal tuft.

Eyes moderate-sized, naked.

Labial Palpi very small, compressed, not extending beyond the front of the eyes, clothed beneath with fine hairs.

Antennæ about half the length of the fore wings, very slender at the base, not annulated with white scales; terminated by a rather elongated thick club, gradually formed, and obtuse at the tip.

THORAX small, short, ovate.

Fore Wings large, subtriangular. Costal margin nearly straight for a considerable part of its length, strongly arched at the tip; apical angle obtuse. Apical margin very convex, entire, more than three fourths of the length of the costa. Inner margin not more than two thirds of the length of the apical margin. Postcostal vein with three branches: the first arising before the anterior extremity of the discoidal cell; the second at some distance beyond its extremity; and the third at about the same distance beyond the second as exists between the latter and the extremity of the cell. Upper disco-cellular vein obsolete: middle disco-cellular short, transverse, arising at a little distance beyond the first branch of the postcostal vein, and simultaneously with the upper discoidal vein, which extends in the same direction as the base of the postcostal, of which it might be regarded as the continuation: lower disco-cellular vein at least twice as long as the upper one, transverse, and slightly arched, closing the discoidal cell by its junction with the third branch of the median vein at a distance from its base equal to half the space between the first and second branches.

Hind Wings narrow. The costal margin nearly straight for two thirds of its length, rounded at the outer angle. The outer margin slightly angulated at the extremity of the postcostal vein; it is then emarginated at the extremity of the discoidal vein, between which and the anal angle the wing is produced into a broad and long tail having a lobe on the inside, into which the first and second branches of the median vein extend, far beyond the extremity of the discoidal vein; the third branch of the median vein extending to the extremity of the attenuated apical part of the tail. Costal vein extending to about two thirds of the costa. Precostal short, curved outwards. Postcostal branching at a considerable distance from the base. Upper disco-cellular oblique, arising a little nearer the body than the branch of the postcostal vein: lower disco-cellular vein equal in length to the upper one, similarly oblique, very slender, closing the discoidal cell close to the origin of the third branch of the median vein, all the branches of which run very close together into the tail, as above mentioned.

Fore Legs of the male very small, slender, and very hirsute, scarcely larger than the palpi. *Fore Legs* of the female nearly three times as long as those of the male, scaly, articulated as in the hind legs.

Four Hind Legs short, scaly, rather robust. Tibial spurs not visible beyond the scales at the end of the tibia.

ABDOMEN small.

In addition to the form of the hind wings, the type of this genus is distinguished by the strong club to the antennæ, the insertion of the second branch of the postcostal vein of the fore wings at a considerable distance beyond the anterior extremity of the discoidal cell, and the shortness of the discoidal cell of the hind wings; the rather oblique upper disco cellular vein arising nearer the body than the branch of the postcostal vein, and the lower disco cellular uniting with the median vein quite close to the origin of the third branch of the median vein.

Our Plate LXX. fig. 3. represents a female; the male is smaller, and is distinguished by wanting the bar near the base of the wings. The under side of the wings resembles the upper.

SYRMATIA.

1. SYRM. DORILAS.

Papilio Dorilas Cramer, Pap. pl. 48. f. C.; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 4. (Syrmatia D.); Doubl. Westw. & Hewits. Gen. D. Lep. pl. 70. f. 3. (Syrmatia D.)

Erycina Dorilas Godart, Enc. M. 1x. p. 564.

Erycina (Dorilas) Asteris G. R. Gray in Griffith's Anim. Kingd. Ins. pl. 102. f. 2.

Limnas Nyx Hübner, Samml. exot. Schm. Bd. 1. pl. —, Verz. bek. Schm. 23. p. 170. (Syrmatia Nyx).

Guiana, Brazil.

B. M.

Genus X. ANTEROS.

ANTEROS *Hübner, Verzeichniss; E. Doubleday.*CHRYSILIS *Boisduval.*ERYCINA and POLYOMMATUS *p. Godt.*

BODY small: wings above generally brownish black, with one or more whitish patches; beneath richly ornamented with metallic spots: legs tufted.

HEAD small, slightly tufted on the crown.

Eyes large, lateral, finely hairy.

Labial Palpi very small, compressed, porrected nearly horizontally, the tip not extending beyond the hairs of the face, clothed beneath with fine rather long hairs, the tip rather acute.

Antennæ rather long, very slender, with the joints in the middle elongated, and annulated with white; terminated by an elongated distinct club, attenuated at its base, and terminated by an acute curved point.

THORAX rather robust.

Fore Wings broadly ovate-subtriangular. Costa arched. Apical angle obtuse. Apical margin convex, entire, two thirds of the length of the costa. Inner margin straight, rather longer than the apical one. Postcostal vein with the first and second branches arising before the anterior extremity of the discoidal cell; third branch arising about half way between the end of the cell and the tip of the wing. Upper disco-cellular vein obsolete: middle one arising about as far beyond the second branch of the postcostal vein as exists between the first and second branches, transverse, and directed rather obliquely towards the base of the wing, short, slender: lower disco-cellular vein longer than the middle one, following its direction, equally slender, and uniting with the median vein exactly at the origin of the third branch. Upper discoidal vein arising exactly at the point of origin of the middle disco-cellular, and following the direction of the base of the postcostal vein, of which it might be considered as the terminal portion.

Hind Wings subovate, arched along the costa. The outer margin more or less scalloped. The anal angle, and one or two of the adjacent prominent points between the scallops, producing very long squamose setæ, those of the anal angle being the longest. Costal vein extending rather beyond the middle of the costa. Precostal vein arising exactly opposite the postcostal, oblique. Postcostal branching at a considerable distance from the base, the branch scarcely extending to the outer angle. Upper disco-cellular very slender, transverse, arising at a little distance beyond the branch of the postcostal vein, short. Lower disco-cellular also very slender, transverse, uniting with the median vein exactly at the origin of its third branch. The submedian vein extending into the elongated anal angle.

Legs very much tufted in both sexes.

Fore Legs of the male very small, forming a dense brush from the base of the tibia to the tip of the tarsus.

Femur very short. Fore Legs of the female rather longer. Femur, tibia, and basal joint of the tarsus clothed with long hairs. Terminal joints of the tarsus short, distinct, and scaly.

Four Hind Legs slender, but densely clothed with long hairs along the femur and tibia. Tarsus with the basal joint furnished with a tuft of long scaly hairs on the outside, set on obliquely. Terminal joints short, thick.

ABDOMEN rather elongated.

The little butterflies forming this genus are among the most brilliant of the insect tribe, although, if the upper surface of their wings be alone regarded, no one would conceive it possible that so much beauty existed in the group. Here, however, we find the richest velvety patches of colour, bearing spots of burnished gold and silver, or variegated with lines of greenish or bluish metallic tints, rendering it difficult to describe, or even to delineate, some of the species. The curious tufts of hair-like scales at the anal angle of the hind wings, together with the short tufted legs, afford the best characters of the group, which is very closely allied to the second section, or subgenus, of *Helicopis*. It may, indeed, be questioned whether *H. Demetria* and *Chrysus* ought not more properly to be considered as a subgenus of *Anteros*; agreeing therewith in the dull colours of the upper surface of the wings, the arrangement of the wing veins, and the structure of the antennæ and legs, but differing in the hind wings being furnished with long tails.

ANTEROS.

1. ANT. RENALDUS.

Papilio Renaldus Stoll, Suppl. Cram. Pap. t. 13. f. 1. 1 a.;

E. Doubl. List Lep. Brit. Mus. pt. 2. p. 4. (Anteros

R.); Doubl. Westw. & Hewits. Gen. D. Lep. pl. 70.

f. 6.

Brazil.

B. M.

644., *Ent. Syst.* III. pt. 1. p. 274. n. 60.; *Godart, Enc. M.* IX. p. 644. n. 100. (*Polyommatus V.*)

(Female) *Papilio formosus Fabricius, Mant. Ins.* II. p.

67. n. 632., *Ent. Syst.* III. pt. 1. p. 273. n. 55.

(*Hesperia f.*); *Cramer, Pap.* pl. 118. f. G.; *Hübner, Verz. bek. Schm.* 77. (*Anteros f.*)

Brazil, Surinam, Pernambuco.

B. M.

2. ANT. VALENS.

(Male) *Papilio Valens Fabricius, Mant. Ins.* II. p. 67. n.

September 1. 1851.

3. ANT. *OTHO* Westw. nov. sp.*
Para (Mus. Saunders).

4. ANT. *CARAUSIUS* Westw. nov. sp.†
Mexico (Mus. Saunders).

B. M.

5. ANT. *AMPYX*.
Papilio Ampyx Drury, *Ill.* iii. pl. 9. f. 2, 3.; *Godart*,
Enc. M. ix. p. 586. n. 105. (*Erycina* A.)
Brazil.

6. ANT. *ACHÆUS*.

Hesperia Achæus Fabricius, *Ent. Syst.* iii. pt. 1. p. 273.
n. 53.; *Cramer*, *Pap.* pl. 352. f. G. H.; *Jones*, *Icones*,
vi. t. 4. f. 1.; *Godart*, *Enc. M.* ix. p. 644. n. 99.
(*Polyommatus* A.); *Donovan*, *Ins. of Ind.* pl. 41. f. 4.
An *A. Ampyx* var.?
Surinam.

7. ANT. *ALLECTUS* Westw. nov. sp.‡
River Amazon (Mus. Saunders, &c.)

Genus XI. ERYCINA.

ERYCINA p. *Latreille*, *W. W. Saunders*.

ERYCINA, *DIORINA*, and *ZEONIA* p. *Boisduval*, *Morisse*.

ANCYLURIS *Hübner*.

BODY robust: hind wings more or less produced into an elongated tail.

HEAD finely hairy, not tufted; widest in the males.

Eyes large, lateral, naked.

Antennæ long, slender, the articulations scarcely distinct; terminated by a long and gradually formed club, about twice as thick as the middle of the antennæ, gradually attenuated to the tip.

Labial Palpi variable in length, scaly, porrected horizontally, or with the tip but very slightly elevated; terminal joint slender, nearly naked.

THORAX robust, slightly clothed with hairs and scales.

Fore Wings elongate triangular. The costal margin straight, or slightly emarginate along a considerable portion of its middle; apical angle generally rather acute. Apical margin elongated, sometimes three fourths of the length of the costa, entire, and often convex. Hinder margin scarcely half the length of the costal, also slightly convex. Postcostal vein with three branches: the first arising shortly before the anterior extremity of the discoidal cell; the second considerably beyond the cell; the third at a little distance beyond the second. Upper disco-cellular obsolete: middle disco-cellular arising at a short distance beyond the first branch of the postcostal vein, and generally a little in advance of the origin of the upper discoidal vein, short, transverse: lower disco-cellular much longer, also transverse, slightly curved, closing the discoidal cell before the middle of the wing, by its union with the third branch of the median vein, close to, or but very little beyond, its origin.

Hind Wings variable in form. The hinder margin produced in the middle into a more or less elongate tail; the entire length of which is traversed by the second branch of the median vein, the first and third branches of which extend to its sides. The costal vein extends nearly to the extremity of the costal margin. The precostal vein short, very oblique, and arising at a rather considerable distance from the body, and running into the dilated base or lobe of the wing. Postcostal vein arising much nearer the body than the precostal, branching at a moderate distance from its base. The upper disco-cellular vein arising at a very short distance beyond the branch, oblique, slightly curved: lower disco-cellular similarly curved and oblique, about twice the length of the middle one, uniting with the third branch of the median vein at a very short distance beyond its origin.

Fore Legs of the male, small, scaly, depressed, with the sides thickly clothed with long hairs. *Fore Legs* of the

* *A. alis supra nigris, anticarum fascia lata obliqua media costaque posticarum albis; alis subtus stramineis; omnibus striga abbreviata basali plagaque magna postica subrotundata nigris virescenti-aureo irroratis lineaque submarginali aurea.* *Expans. alar. antic.* $1\frac{1}{4}$ unc.

† *A. alis supra nigris, anticis maculis binis albis, posticis cæruleo subnitidis; infra castaneo griseoque variegatis, anticarum costa lutescenti discoque maculis duabus albis; posticis striga basali aurea; omnibus strigis abbreviatis in maculas castaneas positos strigisque duabus subapicalibus cæruleo-argenteis.* *Expans. alar. antic. unc.* $1\frac{1}{4}$.

‡ *A. alis supra fuscis, puncto minuto anticarum albedo; omnibus margine tenuissima albo nigro punctato; infra stramineis, disco sulphureo; anticis striga abbreviata subbasali alteraque diminiata media maculisque duabus posticis, alisque posticis maculis quinque discoidalibus, nigris aureo irroratis; margine externo omnium nigro punctato; antennis sensim incrassatis.* *Expans. alar. anticar. unc.* 1.

female cylindrical, scaly, longer than in the males. The intermediate joints of the tarsi armed beneath with spines at the tips.

Four Hind Legs moderately long, cylindrical. Femora of the middle pair elongated and curved. Tibial spurs minute. Tarsal joints armed beneath at the tips with several short spines. Ungues very thin, and much curved, the basal part dilated into an oblong plate, with a deep notch at its extremity, where the terminal hook arises almost at a right angle. Pulvillus large, obtuse, leathery. Paronychial small and short, with the extremity fringed with long setæ.

ABDOMEN short.

The smooth eyes, slightly formed club of the antennæ, and more or less elongated tails of the hind wings (each wing being produced into a single tail in the middle), distinguish this genus; whilst the position of the branches of the postcostal vein of the fore wings, and their transparent character, in the following genus, at once distinguish it from the insects now before us, and which are amongst the most elegant of butterflies. They have recently formed the subject of two memoirs by M. Morisse, in the *Annales de la Société Entomologique de France*, for 1837, and by W. W. Saunders, Esq., in the *Transactions of the Entomological Society of London*. By the former of these writers the species were arranged, including also the naked-winged *Zeonia* under three different genera, according to the various proportions in the length of the labial palpi, as suggested by M. Boisduval in his manuscripts, namely: 1. *Erycina*, with *Papilio Butes* of Clerck as its type; 2. *Diorhina*, comprising a single species, *D. Laonome*; and 3. *Zeonia*, divided into two sections, 1st, with the wings not transparent (*Eryc. Melibœus*, &c.), and 2nd, with the wings transparent (*Pap. Octavius Fabricius*). E. Doubleday, in the *Catalogue of the Lepidopterous Insects in the collection of the British Museum*, united the species forming the first section of these genera together, to which he applied the name of *Diorhina*, giving the name of *Erycina* to Morisse's first section of *Zeonia*, and retaining *Zeonia* for the second section of the same genus. Mr. Saunders, "looking to the imperfect knowledge we yet possess of the species, and the length of the palpi on which the subgenera chiefly depend for character, how these palpi gradually diminish by almost imperceptible degrees from the long porrect ones to those scarcely apparent," included all the species under the genus *Erycina*, grouping the species into various sections. On carefully examining the species with the view to arrive at some satisfactory conclusion as to the rank of these divisions, I feel inclined to follow Mr. Saunders's views, with the exception of removing the naked-winged *Zeonia* from the genus, as they possess a peculiar arrangement of the veins of the fore wings not found in the others. It is true that we find several important variations in the shape of the hind wing, among the species here retained in the genus, accompanied by certain modifications in the arrangement of the wing veins. Thus, in the *Butes* group, the middle of the hind wing is prolonged into a very narrow tail as long as the rest of the wing, and for the necessary support of this tail the branches of the median vein are disposed quite close together, the middle one running down the middle of the tail, and the first and third extending partially along its sides; whilst in the other species with broader tails the branches of the median veins are less contiguous, and in *Lysippus* and *Belphegor* they are as wide apart as any of the other veins, the tails being short and wide. Yet in all these species the precise insertion of the various veins and their branches is preserved, in addition to which there is a general similarity in their larger size, and in the colouring and bar-like markings of the wings.

Mr. Saunders also well remarks that our knowledge of the various species is still very imperfect, and in several instances only one sex is known; moreover, as the sexes vary greatly in outline and colouring, further investigation will in all probability prove that some of the species founded upon the female sex will not stand good. According to Mr. Swainson, the sexes of *E. Butes* (*Rhetus Cramerii* *Sw.*) scarcely differ from each other in their form, colour, or markings. The male of *E. Dysoni* has the upper surface of the fore wings splendidly glossed with blue, with two slightly defined pale strigæ; whereas the female of the same species has the fore wings more convex, the ground colour paler, and destitute of the blue tint, and the fasciæ much broader. The species allied to *Pyretus Cramer* agree in the colours of the upper surface of the wings in the two sexes, being black with crimson fasciæ; but the female has the fore wings more convex, with a subapical pale striga, and the hind wings have the tails broader and more decided: beneath however, all the wings in the male are glossed with the most brilliant blue and golden green tints, varying in different lights; whereas, the female has the under surface almost similar to the upper side.

The species appear to be confined to the continent of Tropical America, Mexico being the northern, and Brazil the southern, limit of their range.

ERYCINA.

Division *. Palpi projecting beyond the face.

Section I. Palpi projecting considerably beyond the length of the head. Tails very long and narrow. (Subgenus *Rhetus* Swainson, *Erycina* Morisse.)

1. ERYC. BUTES.

Papilio Butes Clerck, *Icon.* pl. 46. f. 6.; *E. Doubleday*, *List Lep. Brit. Mus.* pt. 2. p. 4.; *W. W. Saunders*, *Trans. Ent. Soc. Lond.* v. p. 217.

Papilio Licarsis Fabr. *Mant. Ins.* ii. p. 9. n. 73., *Ent. Syst.* iii. pt. 1. p. 28. n. 83.; *Herbst*, *Pap.* t. 58. f. 4.; *Godart*, *Enc. M.* ix. p. 564. n. 3. (*Erycina* L.); *Morisse*, *Ann. Soc. Ent. de France*, vi. t. 14. f. 1, 2.; *Boisduval*, *Sp. gén. Léop.* pl. 20. f. 6.

Diorhina Rhetus *E. Doubl. List Lep. B. M.* pt. 2. p. 3. *Syrmatia Rhetus* *Hübner*, *Verz. bek. Schm.* p. 23. n. 171. *Rhetus Cramerii* *Swainson*, *Zool. Ill.* 2nd ser. t. 33.

Var. *Saunders*, *Op. cit.* pl. 20. f. 6.
Guiana, Brazil, Venezuela.

B. M.

2. ERYC. RHETUS.

Papilio Rhetus *Cramer*, *Pap.* pl. 63. f. C.; *Saunders*, *Trans. Ent. Soc. Lond.* v. p. 217.
Surinam.

3. ERYC. THIA.

Erycina Thia *Morisse* in *Ann. Soc. Ent. de France*, vi. p. 419. t. 14. f. 3, 4.; *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 4. (*Diorhina* Th.)
Mexico, Honduras.

B. M.

4. ERYC. ARISTODORUS.

Erycina Aristodorus *Boisduval* *MS.*; *Morisse* in *Annales Soc. Ent. France*, vi. p. 420.
Cayenne.

Section II. *Palpi projecting in front of the face, but not exceeding the length of the head.*

Subsection A. *Wings narrow. Tails of moderate length. (Subgenus Diorina Boisduval, Morisse.)*

5. ERYC. LAONOME.
Diorina Laonome Boisduval MS.; Morisse in *Ann. Soc. Ent. France*, vi. p. 422. pl. 14. f. 5, 6.
Erycina Iphinoe (male) Godart, *Enc. M.* ix. p. 565. n. 7.
Brazil, Columbia, Venezuela. B. M.

6. ERYC. DYSONII.
Erycina Dysonii W. W. Saunders, *Trans. Ent. Soc. Lond.* v. p. 218. pl. 20. f. 1. 1 a. (male) 2. 2 a. (fem.)
Venezuela.

7. ERYC. PSECAS.
Diorhina Psecas E. Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 3.
Erycina Psecas Saunders, *Trans. Ent. Soc.* v. p. 219. pl. 20. f. 4. 4 a.
Bolivia.

8. ERYC. IPHINOE.
Ancyluris Iphinoe Geyer in *Hübner's Samml. exot. Schm.* Band iii. pl. —. (male).
—?

Subsection B. *Wings very broad. Tails very short. (Subgenus Nirodia).*

9. ERYC. BELPHEGOR nov. sp.†
Eryc. Belphegor Westwood MS.; Doubl. Westw. & Hewits.
Gen. D. Lep. pl. 70. f. 1.
River Amazon (Mus. Saunders).

Division **. *Palpi not projecting beyond the face. (Rodinia Westw., Zeonia p. Morisse.)*

Section I. *Body robust. Fore wings triangular.*

Subsection A. *Wings of the Males not glossed beneath with metallic blue or green.*

10. ERYC. JURGENSENII.
Erycina Jurgensenii W. W. Saunders in *Trans. Ent. Soc. Lond.* v. p. 220. pl. 20. f. 3.
Mexico.

11. ERYC. CALPHARNIA.
Erycina Calpharnia W. W. Saunders in *Trans. Ent. Soc. Lond.* v. p. 221. pl. 20. f. 7. 7 a.
—?

12. ERYC. PERIANDER.
Papilio Periander Cramer, *Pap.* pl. 188. f. C. (fem.)
Ancyluris Periandra Hübner, *Verz. bek. Schm.* p. 23. n. 169.
Erycina Iphinoe Godart, *Enc. M.* ix. p. 565. n. 7. (female).
Ancyluris Iphinoe Hübner, *Samml. exot. Schm.* Band iii. pl. —. (female).
Zeonia Per. Morisse, *Ann. Soc. Ent. Fr.* vi. p. 424.
Guiana, Brazil.

13. ERYC. AULESTES.
Papilio Aulestes Cramer, *Pap.* pl. 128. f. G. (female).
Papilio Auletes Herbst, *Pap.* pl. 60. f. 1.; Godart, *Enc. M.* ix. p. 565. n. 8. (Erycina Aulestes).

Syrmatia Aulestes Hübner, *Verz. bek. Schm.* p. 23. n. 172.

Zeonia Aulestes Morisse, *Ann. Soc. Ent. Fr.* vi. p. 424.
Surinam, Guiana.

14. ERYC. GLAPHYRA.
Erycina Glaphyra E. Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 3.; W. W. Saunders in *Trans. Ent. Soc. Lond.* v. p. 222. pl. 21. f. 3. 3 a.
Para.

15. ERYC. PANDAMA.
Erycina Pandama E. Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 3.; W. W. Saunders in *Trans. Ent. Soc. Lond.* v. p. 222. pl. 20. f. 5. 5 a.
Bahia.

16. ERYC. TEDEA.
Papilio Tedeia Cramer, *Pap.* pl. 102. f. A.; Hübner, *Verz. bek. Schm.* p. 23. n. 167. (Ancyluris T.); Herbst, *Pap.* t. 59. f. 6.; Morisse, *Ann. Soc. Ent. France*, vi. p. 425. (Zeonia); W. W. Saunders in *Trans. Ent. Soc. Lond.* v. p. 223. pl. 23. f. 2. 2 a.
Erycina Aulestes (male) Godart, *Enc. M.* ix. p. 565. n. 8.
Guiana, Surinam.

Subsection B. *Wings of the Males shaded with metallic blue or green on the under sides.*

17. ERYC. MELIBŒUS.†
Papilio Melibœus Fabricius, *Gen. Ins. Mant.* p. 271. (1776), *Ent. Syst.* iii. pt. 1. p. 29. n. 84.; Godart, *Enc. M.* ix. p. 565. n. 9. (Erycina M.); Herbst, *Pap.* pl. 59. f. 4, 5.
Papilio Pyretus Cramer, *Pap.* pl. 144. f. A. B. (1781); Hübner, *Verz. bek. Schm.* p. 23. n. 168. (Ancyluris P.)
Erycina Julia W. W. Saunders in *Trans. Ent. Soc. Lond.* v. p. 21. f. 1. 1 a. (m.), 2. 2 a. (f.), but not the description (p. 225.).
Amazon, Para, Surinam. B. M.

18. ERYC. JULIA.§
Erycina Julia E. Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 3.
Erycina Julia W. W. Saunders in *Trans. Ent. Soc. Lond.* v. p. 225. (the description, but not the figures).
Erycina Pyretus W. W. Saunders in *Trans. Ent. Soc. Lond.* v. p. 224. (exclusive of the synonyms) pl. 21. f. 4. 4 a.
Erycina Melibœus Boisduval, *Sp. gén. Léop.* i. pl. 6. f. 12.; Morisse in *Ann. Soc. Ent. France*, vi. p. 426. (Zeonia M.)
Bolivia. B. M.

19. ERYC. MONTEZUMA.
Erycina Montezuma W. W. Saunders in *Trans. Ent. Soc. Lond.* v. p. 226. pl. 21. f. 5. 5 a.
Mexico.

20. ERYC. INCA.
Erycina Inca W. W. Saunders in *Trans. Ent. Soc. Lond.* v. p. 227. pl. 21. f. 6. 6 a.
Mexico.

Section II. *Body slender. Fore Wings oval: the Postcostal Vein with two branches before and one far beyond the end of the discoidal cell. (Rodinia Westw.)*

21. ERYC. LYSIPPUS.
Papilio Lysippus Linnæus, *Syst. Nat.* ii. p. 793. n. 250., *Mus. Utr.* p. 232.; Fabricius, *Syst. Ent.* p. 529. n.

† E. alis nigris; anticis latis, utrinque striga transversa abbreviata pone medium alba; posticis in medio marginis postici angulatis, puncto fulvo versus angulum externum, alteroque cuneato versus angulum analem sanguineo; subtus similis, alis anticis puncto basali, posticis puncto versus apicem abdominis sanguineis. Ciliis albo punctatis. Expans. alar. antic. fere unc. 2.

‡ E. alis posticis utriusque sexus supra puncto basali albo, maris lunula sanguinea ad basin caudæ; anticis subtus puncto subbasali ovali alba, fascia media nigra; posticis margine anali ceruleo-viridi ad angulum analem extenso, puncto ovali sanguineo intra marginem.

§ E. alis posticis supra fascia sanguinea irregulari ad basin caudæ; subtus alis anticis fascia maculari media apiceque nigris posticis; lunula sanguinea ad marginem analem extensa.

365., *Ent. Syst.* III. pt. 1. p. 321. n. 218.; *Clerck, Icon.* t. 22. f. 3, 4.; *Drury, Ill.* I. pl. 2. f. 2. 2 a.; *Cramer, Pap.* pl. 380. f. A.; *Godart, Enc. M.* IX. p. 566. n. 11. (*Erycina* L.); *Hübner, Verz. bek. Schm.*

p. 22. n. 163.; *Zutrage exot. Schm.* f. 527, 528.; *Morisse, Ann. Soc. Ent. France*, VI. p. 425. (*Zeonia* L.); *Lucas, Hist. Nat. Lep. exot.* pl. 43. f. 2. Guiana, Brazil.

Genus XII. ZEONIA.

ZEONIA *Swainson.*

ZEONIA p. *Morisse.*

ETHELIDA *Boisduval MS.*

SYRMATIA p. *Hübner.*

CHORINÆA *G. R. Gray.*

ERYCINA p. *Saunders.*

BODY robust: wings with two very broad transparent fasciæ; hind wings extending into long tails.

HEAD wide, with a short truncate tuft of hair in front below the antennæ.

Eyes occupying the anterior angles of the head, naked.

Labial Palpi very short, the tip not extending so far as the front of the tuft of hairs on the face, very hairy beneath; terminal joint very short and triangular.

Antennæ considerably longer than half the length of the fore wings, slender; annulations scarcely distinct, and not ringed with white; terminated by a long gradually formed club of moderate thickness, obtuse, and recurved at the tip.

THORAX robust, clothed with short hairs at the sides and behind.

Fore Wings large, elongate-triangular, transparent; with the base, costa, a central fascia, and the apical margin clothed with black scales. Costal margin nearly straight; apical angle subacute. Apical margin more than three fourths of the length of the costal one, straight, or but slightly convex. Inner margin straight, short. Postcostal vein with its first branch arising beyond the anterior extremity of the discoidal cell; the second branch rather beyond the middle of the wing, followed at a short distance by the third branch. Upper disco-cellular vein obsolete: middle one arising before the first branch of the postcostal vein, short, rather oblique: lower disco-cellular vein four times as long as the middle one, rather curved, uniting with the third branch of the median vein at a little distance beyond its origin, closing the discoidal cell before the middle of the wing in the black fascia.

Hind Wings with a broad central and smaller submarginal transparent fasciæ, produced into a long tail in the middle of the posterior margin, the anal angle of the wing being elongated to about half the length of the tail. Costal margin nearly straight. Postcostal vein branching at a considerable distance beyond the middle of the wing. Upper and lower disco-cellular veins oblique, the former arising at a very short distance beyond the branch of the postcostal vein, and the latter uniting with the median vein close to the origin of the third branch, closing the discoidal cell far beyond the middle of the wing. The middle of the tail is traversed by the middle branch of the median vein, the other two branches of which are quite close to the middle one; one of them extending to either side of the base of the tail. The submedian vein extends to the extremity of the lobe at the end of the anal margin.

Fore Legs of the male very short and densely hairy.

Four Hind Legs long, slender, scaly. Femur shortly hairy beneath. Tibial spurs distinct. Tarsi furnished beneath with short spines.

In the partially transparent wings, and elongated tails of the hind wings, the species of this genus bear a strong analogical resemblance to those of *Leptocircus*; the variations in the structure of the antennæ, fore legs, and veins of the wings are sufficient, however, to show that the two groups belong to distinct families of butterflies. From the tailed *Erycinæ*, as well as from the species of that genus which possess very short palpi, these insects are separated by their semitransparent wings, and by the arrangement of the branches of the postcostal vein in the fore wings; all of which arise beyond the anterior extremity of the discoidal cell. In *Z. Xantippe*, the first branch arises very near the extremity of the costal vein, with which it becomes confluent for a short distance, and then branches off into its ordinary termination. In *Z. Octavius* it however arises at but a very short distance beyond the cell, and, although for a portion of its distance it runs quite close to the costal vein, it does not absolutely unite with it as is the case with the preceding species.

ZEONIA.

1. ZEON. XANTIPPE.

Corinæa Xantippe G. R. Gray in *Griffith's An. Kingdom, Insects*, pl. 102. f. 1.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 72. f. 4.

Zeonia Morissei Boissduval MS.; *Isabelle, Voy. à Buenos Ayres*, p. 325.; *Morisse, Annales Soc. Ent. France*, vi. p. 427. pl. 14. f. 7, 8.

Zeonia Chorinæus E. Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 3.

Eastern Banda, Brazil.

B. M.

2. ZEON. HELICONIDES.

Zeonia Heliconides Swainson, *Zool. Ill.* 2nd ser. pl. 111.; *Morisse, Ann. Soc. Ent. France*, vi. p. 428.

Northern Brazil.

3. ZEON. TIMANDRA.

Erycina Timandra W. W. Saunders in *Trans. Ent. Soc. London*, v. p. 228. pl. 23. f. 1. 1 a.

Brazil.

4. ZEON. OCTAVIUS.

Papilio Octavius Fabricius, *Mant. Ins.* t. II. p. 9. n. 72., *Ent. Syst.* III. pt. 1. p. 28. n. 82.; *Godart, Enc. M.* ix. p. 564. n. 6. (*Erycina* O.); *Herbst, Pap.* t. 60. f. 2.; *Morisse in Annales Soc. Ent. France*, vi. p. 426. (*Zeonia* Oct.).

Papilio Faunus Fabricius, *Spec. Ins.* II. p. 16. n. 93.

Papilio Chorinæus Cramer, *Pap.* pl. 59. f. A.

Syrmatia Chorinæa Hübner, *Verz. bek. Schm.* p. 23. n. 173. Guiana, Surinam, Brazil.

Genus XIII. NECYRIA.

NECYRIA Westwood.

BODY rather slender: wings large, entire, more or less glossed with metallic blue and green tints, and with blood-red spots.

HEAD moderate-sized, hairy.

Eyes naked.

Labial Palpi small, very hairy: terminal joint minute, conical, not extending beyond the hairs of the face.

Antennæ about half the length of the fore wings, slender, annulations indistinct; terminated by an elongate rather slender, gradually formed club, obtuse at the tip.

THORAX moderate-sized, hairy, especially at the sides.

Fore Wings large, subtriangular. Costal margin nearly straight. Apical margin more than three fourths of the length of the costal, entire, slightly convex, or nearly straight. Inner margin straight, and short. Veins arranged as in *Erycina*: the middle disco-cellular and the upper discoidal originating together, beyond the first branch of the postcostal vein; the postcostal being rather angulated at the place of their origin, the upper discoidal appearing to form its apical portion.

Hind Wings triangularly subovate. Costal margin slightly arched. Apical margin entire, convex; anal angle rounded, not produced into a point or tail. Anal margin scarcely forming a groove for the reception of the abdomen. Veins arranged as in *Erycina*: the upper disco-cellular vein arising at a very short distance beyond the branch of the postcostal, oblique; lower disco-cellular uniting with the third branch of the median, close beyond its origin, closing the discoidal cell at little more than one third of the length of the wing from its base: the branches of the median vein are at the same distances apart as the discoidal and postcostal ones.

Legs as in *Erycina*.

The two beautiful insects of which I have formed the present genus are very closely allied to *Erycina* in their general characters, as well as in their colouring; they do not exhibit, however, the regular transverse fasciæ of the species of that genus, and the arrangement of the brilliant metallic colouring of these insects is quite different from that of the *Erycinæ*. The hind wings, also, have not the slightest tendency to elongate into tails in the middle of the hinder margin, and the veins are consequently arranged at equal widths apart.

The species inhabit Western Brazil and Quito.

NECYRIA.

1. NEC. BELLONA.*

Necyria Bellona Westw. MS.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 73. f. 9.

Western Brazil (Bridges).

B. M. and Saunders.

2. NEC. DUELLONA.†

Necyria Duellona Westw. MS. n. sp.

Quito.

B. M.

* N. alis supra cyaneo-nigris, pone medium magis cyaneis venis nigris, omnibus striga abbreviata transversa pone medium sanguinea, subtus anticis disco viridi-cæruleo venis nigris, posticarum marginibus cæruleo nitidissimo late tinctis; illis absque striga, his macula rotundata versus apicem abdominis cum striga connexa, sanguinea (interdum supra etiam obvia). Expans. alar. unc. 2.

† N. alis supra nigris; anticis fasciâ transversa pone medium e maculis conoideis cæruleo-viridibus nitidissimis; posticis macula subcostali alteraque versus apicem abdominis sanguineis serieque submarginali octo macularum conoidearum viridi-cæruleis; omnibus subtus versus basin viridi-cæruleo maculatis maculisque conoideis paginæ superæ ejusdem coloris majoribus, anticis puncto versus marginem internum, alteroque posticarum versus apicem abdominis sanguineis. Expans. alar. unc. 2½.

Genus XIV. LYROPTERYX.

LYROPTERYX *Westwood MS.*

BODY very robust: wings with numerous longitudinal streaks of metallic colours above; beneath black, the basal half spotted with purple, the outer half with black and white stripes.

HEAD short, broad, clothed with short scaly hairs.

Eyes large, naked, but not prominent.

Labial Palpi small, scaly; the tip not visible from above, nor extending beyond the scaly hairs of the front of the face, ascending obliquely to about the level of one fourth of the height of the eyes; terminal joint minute, slender, and subovate, with the tip subacute.

Antennæ about three fifths of the length of the fore wings, slender, nearly straight; articulations scarcely distinct, and not annulated with white; terminated by a long and gradually formed but rather slender club, the extremity of which is also gradually pointed.

THORAX very robust, oval, scaly.

Fore Wings large, subtriangular. Costal margin nearly straight, except towards the tip, where it is arched; apical angle rather obtuse. Apical margin three fourths of the length of the costal, moderately convex. Inner margin nearly straight, and about the length of the apical. Veins arranged nearly as in *Erycina* and *Necyria*; the postcostal vein emitting three branches; the first a little before the anterior extremity of the discoidal cell; the second considerably beyond its extremity; and the third at about the same distance from the second as the second is from the cell. Upper disco-cellular vein obsolete: middle and lower ones very slender, the middle one arising a short distance beyond the first branch of the postcostal vein, oblique, its lower end being directed towards the base of the wing: lower disco-cellular rather longer than the middle one, also oblique, but more arched, its lower end uniting with the third branch of the median vein at a little distance beyond its origin.

Hind Wings comparatively small, subtriangular, the outer margin being somewhat obliquely truncate. Costal vein arched, extending nearly to the outer angle. Precostal oblique, curved. Postcostal arising much nearer the body than the precostal, branching at a moderate distance from its base. Upper disco-cellular arising close beyond the branch of the postcostal, oblique, very slender: lower disco-cellular rather longer, rather less oblique, equally slender, and uniting with the third branch of the median vein close beyond its origin.

Fore Legs small, densely clothed with woolly hairs.

Four Hind Legs rather long, scaly, not hairy beneath. Femur of the middle pair greatly elongated and curved.

Tibiæ slightly spined beneath; tibial spurs distinct, acute. Tarsi armed beneath with numerous short acute spines. Ungues rather large, densely notched in the middle; the basal portion forming a rather square plate.

Paronychiae armed with numerous curved strong setæ.

ABDOMEN much smaller than the thorax, conical.

The two very beautiful butterflies which constitute the present genus, although agreeing with some of the species of *Erycina* and *Necyria* in the black colour of their wings, varied with metallic tints, as well as in the general arrangement of the wing veins, are so well characterised by their extraordinarily robust bodies, long antennæ, and form of their wings, especially the small size of the hinder pair, as well as the very peculiar character of their markings, that I have considered it advisable to form them into a distinct genus. Another peculiarity consists in the style of their coloration, the upper surface of the wings alone being varied with metallic tints; whereas in the genera above mentioned both surfaces, or the under side alone, are so distinguished. It will be seen that the apical half of the wing in the typical species has two long slender dashes of green between each pair of veins. On the under side these pale streaks are rather narrower and white (remining one of the strings of a harp, whence the generic name), the base of the wing being velvety black, marked with a number of brilliant purplish crimson round spots.

The species inhabit the banks of the Amazon and Brazil.

LYROPTERYX.

1. LYROPT. APOLLONIA.

Lyropteryx Apollonia *Westw.* n. sp.*; *Doubl. Westw.* &
Hewits. Gen. D. Lep. pl. 72. f. 1.
River Amazon.

Mus. Bates.

2. LYROPT. TERPSICHORE.

Lyropteryx Terpsichore *Westw.* n. sp.†
Brazil.

Mus. Saunders.

* *L. alis supra cyaneo-nigris, anticarum costa striolis quinque basalibus aliisque numerosis longitudinalibus e medio ad apicem extensis, nec non marginis externi posticarum viridibus, his etiam puncto chermesino-purpureo basali notatis; omnibus infra dimidio basali atris chermesino-purpureo maculatis dimidio apicali albo longitudinaliter striatis, abdomine utrinque sanguineo-maculato.* *Expans. alar. antic. unc. 2½.*

† *L. alis utrinque cyaneo-nigris, basi præsertim subtus sanguineo maculato, strigis numerosis albis e medio versus apicem anticarum extensis marginemque externum posticarum attingentibus, abdomine nigro.* *Expans. alar. antic. unc. 2.*

Genus XV. CYRENIA.

CYRENIA *Westwood MS.*

BODY very robust: wings black, spotted with white and red; fore wings triangular; hind wings oval.

HEAD small, thickly clothed with short hairs, forming a truncated tuft beneath the antennæ.

Eyes moderate-sized, thickly clothed with fine hairs.

Antennæ about two thirds of the length of the fore wings, slender, not annulated with white; terminated by an elongated slender club, pointed at the tip.

Labial Palpi small, obliquely porrected; the tip visible beyond the hairs of the face, and elevated to about one third of the height of the eye.

THORAX very robust, finely hairy, especially behind.

Fore Wings nearly triangular. Costa nearly straight, except at the tip, which is curved; apex acute. Apical margin three fourths of the length of the costal, entire, slightly convex. Inner margin nearly straight, three fourths of the length of the apical. Veins arranged as in *Necyria* and *Lyropteryx*; the second branch of the postcostal vein arising, however, nearer the extremity of the discoidal cell, and the middle and lower disco-cellulars of nearly equal length, and oblique; the cell not extending more than two fifths of the length of the wings.

Hind Wings elongate-ovate. Costal margin well arched. Outer margin produced and rounded, entire, with a very slight emargination at the extremity of the discoidal vein. Veins arranged as in the two preceding genera; the upper disco-cellular vein being oblique, and the lower one transverse.

Fore Legs of the males very densely clothed with long soft hairs.

Hind Legs rather short, hairy beneath. Tibia and tarsi finely spined beneath. Claws minute.

ABDOMEN small, conical.

The insect which is the type of the present genus agrees tolerably well with *Necyria* and *Lyropteryx* in the arrangement of its wing veins, and generally robust character; but the hairy eyes, longer palpi, and elongate-oval form of the hind wings, as well as the style of its colouring, prevent its association with either of those genera. The base of the wings, although of a dark colour, exhibits various still darker transverse fasciæ; whilst the contrast of the pure white and blood-red spots (especially on the under side, where the black ground colour of the wings has a purple tinge) renders this a very conspicuous butterfly. As in several of the nearly allied genera, the hind wings have a longitudinal brush of hairs between the submedian and median veins.

CYRENIA.

1. *Cyr. MARTIA*.

Cyrenia Martia *Westw.* n. sp.*; *Doubl. Westw. & Hewits.*

Gen. D. Lep. pl. 72. f. 2.

River Amazon.

Mus. Bates.

* *C. alis supra nigris, anticis basi griseo-nigris, strigis duabus undulatis nigris, macula magna ovali media alba: posticis nigris, macula minori pone medium alba, altera versus medium costæ tertiæque versus apicem abdominis sanguineis; alis subtus concoloribus, posticis cyaneo-nigris punctis nonnullis basalibus transversis nigris, macula alba majori rotundata strigæque tenui abbreviata versus angulum analem albis.* *Expans. alar. antic. unc. 1 $\frac{3}{4}$.*

Genus XVI. HADES.

HADES *Westwood MS.*

BODY small: wings large, rounded, of a uniform black colour above.

HEAD small, very finely hairy, the hairs forming a small tuft below the antennæ.

Eyes moderate-sized, naked.

Labial Palpi very minute, compressed, not extending beyond the hairs of the face and not visible from above, finely hairy beneath, obtuse at the tip.

Antennæ not more than two fifths of the length of the fore wings, slender; joints indistinct, not ringed with white; terminated by a long, gradually formed, slender club, the tip of which is also gradually attenuated.

THORAX small, moderately hairy.

Fore Wings large, triangularly ovate. Costal margin strongly arched along its whole length; apical angle obtuse. Apical margin strongly convex, entire, about two thirds of the length of the costa. Inner margin about the length of the apical, slightly convex. Postcostal vein with its first branch arising before the anterior extremity of the discoidal cell; second branch arising at about the same distance beyond the cell as the first is in advance of it; postcostal vein itself slightly angulated at a short distance beyond the origin of the second branch (where the upper discoidal arises); third branch of the postcostal, very short, and arising quite close to the tip of the wing. Upper disco-cellular vein obsolete: middle one arising rather before the middle of the length of the wing, curved, directed obliquely towards the apical margin: lower disco-cellular slightly longer than the middle one, but straight, and nearly transverse, closing the discoidal cell about the middle of the wing, by its junction with the third branch of the median vein, at about the same distance from its origin as exists between the first and second branches.

Hind Wings rather large, nearly regularly oval, entire; the base of the costal margin not angulated nor dilated, as in many of the adjacent genera. Costal margin regularly curved. Outer margin rounded, entire; anal angle rounded. Anal margin forming a moderate groove for the reception of the abdomen.

Fore Legs of the female (specimens of that sex only have hitherto been observed) very short, thick, and scaly. The femur slightly hairy; and the tarsi thickly scaly, and scarcely armed beneath with short spines.

Four Hind Legs short, rather thick, strongly scaly. Hind femora rather shorter than the middle ones, finely hairy beneath. Tarsi thick, scaly, almost destitute of fine spines. Claws and their appendages very small.

ABDOMEN (of the female) but slightly larger than the thorax.

I have established this genus on the examination of a single individual of the female sex of a large and remarkable species, which I find it impossible to associate with any of the other groups of Erycinidæ. In its general form it somewhat approaches the *Necyriæ*, as well as in the rounded entire form of the wings; but the singularly uniform style of colouring, and the arrangement of the wing veins, at once remove it from that group, as well as from *Lyropteryx*, with which the longitudinal pale streaks of the under side of the outer half of the wings present a certain degree of relationship. On the under side, the wings are still further distinguished by having an orange-coloured patch at the base of each.

The species was brought by Mr. Dyson from Colombia, and is in the rich collection of W. W. Saunders, Esq., who has, with his usual liberality, placed the whole of his collection of butterflies at my disposal for the purpose of enabling me to render the present work more perfect than I could otherwise have ventured to hope that it would have been.

The generic name is given in allusion to the uniform black colour of the upper surface of the wings.

HADES.

1. HADES NOCTULA.

Hades Noctula *Westw. MS.* n. sp. *; *Doubl. Westw. & Hewits. Gen. D. L.* pl. 72. f. 3.
Colombia. Mus. Saunders.

* H. alis supra nigris, cyaneo parum cinctis, ciliis albis: subtus concoloribus apice parum pallidioribus, omnibus basi macula aurantia; posticis pone medium albo longitudinaliter obscure lineatis; lineis per paria in medio alæ convergentibus. Exp. alar. antic. unc. 2 $\frac{1}{4}$.

Genus XVII. CALYDNA.

CALYDNA *E. Doubleday, List Lep. B. M.*
 THAROPS, ÆTHEIUS, and HAMANUMIDA *p. Hübner.*

BODY rather slender: wings large, irregular along the apical margins; dark-coloured, and marked with numerous freckles and small spots of various colours.

HEAD moderate-sized, slightly tufted in front below the antennæ.

Eyes naked.

Antennæ of moderate length, slender; articulations ringed with white, those next the base of the club almost entirely white. Club elongate, gradually formed, about twice the thickness of the rest of the antenna, obtuse at the tip.

Labial Palpi very small, hairy beneath. Basal joint curved, nearly as long as the middle one, which is straight and nearly horizontal; terminal joint minute, slender, nearly naked, the tip not extending beyond the hairs of the face.

THORAX rather broad, clothed with hairy scales at the sides and behind.

Fore Wings somewhat triangular. Costal margin nearly straight; apex subobtuse. Apical margin about five sevenths of the length of the costal, irregularly waved. Inner margin nearly straight, about the length of the apical. Postcostal vein with three branches: the first and second arising close together before the anterior extremity of the discoidal cell; third branch arising about half way between its extremity and the tip of the wing. Upper disco-cellular vein obsolete: middle one arising simultaneously with the upper discoidal (which follows the direction, and might be regarded as the extremity, of the postcostal vein) at about the length of half the wing, very slender, transverse: lower disco-cellular also very slender, rather longer, following the same direction, and closing the discoidal cell transversely at about the middle of the wing, by its union with the third branch of the median vein close to, or at a very short distance beyond, its origin: the space between the second and third branches of the median vein, and that between its first branch and the submedian, forming deeper scallops than between any of the other veins.

Hind Wings subovate, angulated near the base of the costal margin, irregularly scalloped along the outer margin; the anal margin scarcely forming a channel for the reception of the abdomen. Costal vein extending to the outer angle of the wing. Postcostal vein branching at a rather short distance from the base. Upper and lower disco-cellular veins very slender; the former arising quite close to the origin of the branch of the postcostal, and the latter joining the median quite close to the origin of its third branch.

Fore Legs of the male very small, and densely hairy. *Fore Legs* of the female twice the length of those of the male, very slender, scaly. Femur about one third longer than the tibia. Tibia and tarsus of equal length.

Four Hind Legs slender, long, scaly. Femur slightly hairy beneath. Tibial spurs very minute. Basal joint of the tarsus considerably elongated; all the joints armed beneath at the tips with a pair of minute spines. Claws and their appendages very small.

The dark colours of the wings of the butterflies of this genus, marked with numerous small dots and spots of various tints, giving them a freckled appearance, united with the irregular apical margin of the wings and the antennæ ringed with white, will serve to separate the species from the adjoining groups. The species appear rather numerous; some of them having the wings not so irregularly scalloped as in the type, and the spots larger, paler, and more regularly arranged. *Papilio Meris*, which Mr. E. Doubleday introduces into the genus in the *List of the Lepidopterous Insects of the British Museum*, does not associate well with the rest, having differently shaped wings, with a very different style of marking, and also possessing hairy eyes.

CALYDNA.

1. CAL. THERSANDER.

Papilio Thersander Cramer, Pap. pl. 335. f. A. B. (male);
Godart, Enc. M. ix. p. 579. n. 73. (Erycina Th.); E.
Doubleday, List Lep. Brit. Mus. pt. 2. p. 5. (Calydna
Th.); Hübner, Verz. bek. Schm. p. 109. n. 1180.
(Tharops Th.)

Guiana and Brazil.

B. M.

2. CAL. EUTHRIA.

Calydna Euthria E. Doubleday, List Lep. Brit. Mus. pt.
2. p. 5.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 70.
f. 10.

Brazil, Honduras.

B. M.

3. CAL. STURNULA.

Hamanumida Sturnula Hübner, Zutrage exot. Schm. f.
995, 996.
 Brazil.

4. CAL. LUSCA.

Hamanumida lusca Hübner, Samml. exot. Schm. Band iii.
pl. —.
 South America.

Genus XVIII. EURYGONA.

ERYGONA *Boisduval*.ERYTHIA, EUSELASIA, *Hübner*.ERYCINA p. *Godt*.

BODY robust: wings large, generally entire; hind ones elongated, and considerably variegated beneath, generally with a dark spot near the outer angle.

HEAD short, transverse, slightly tufted between the antennæ.

Eyes naked.

Antennæ very slender, nearly two thirds of the length of the fore wings; articulations not very distinct, and slightly annulated with white; terminated by a moderately elongated club, gradually formed, slender, obtuse at the tip.

Labial Palpi very minute, compressed, not extending so far as the hairs of the face, clothed beneath with scaly hairs; terminal joint very small, conical.

THORAX elongate-ovate, thickly clothed behind with hairs.

Fore Wings subtrigonal. Costal margin slightly arched; apical angle rather obtuse. Apical margin rather more than two thirds of the length of the costal, entire, very slightly convex. Inner margin straight, and rather shorter than the apical. Costal vein extending to the middle of the costa. Postcostal with three branches: the first and second arising close together, a little before the anterior extremity of the discoidal cell; third branch arising at a short distance from, and sometimes quite close to, the apex of the wing (e. g. in *E. Euriteus* it is so small as to be almost obsolete). Upper disco-cellular vein obsolete: middle one very slender, arising about the middle of the length of the wing, a little beyond the second branch of the postcostal, short, strongly angulated at a little distance from its origin; the angle throwing off a short spur into the discoidal cell, directed towards the base of the wing; beyond the angle the vein is considerably oblique: lower disco-cellular rather longer than, but not so oblique as, the middle one, very slender, uniting with the third branch of the median at about the same distance from its base as the length of the lower disco-cellular itself, closing the discoidal cell almost at a right angle with the third median branch. The upper discoidal vein arises close to, or at a short distance beyond, the extremity of the discoidal cell, forming as it were the continuation of the postcostal vein.

Hind Wings more or less oblong-ovate, sometimes elongate-triangular. Costal margin well arched. Apical margin rounded, entire, or but very slightly scalloped. Costal vein extending about two thirds of the length of the costa. Precostal short, its apex curved slightly towards the body. Postcostal vein branching at a rather short distance from the base. Upper disco-cellular forming the slightly curved base of the discoidal vein, and arising at a short distance beyond the origin of the postcostal branch: lower disco-cellular not quite so oblique, very slender, arising further from the base of the upper one, than the space between the origin of the postcostal branch and the base of the upper disco-cellular, and uniting with the third branch of the median vein at a distance from its origin rather less than the space between the first and second median branches, closing the discoidal cell in rather an acute point.

Fore Legs of the male densely hairy, and very short. *Fore Legs* of the female also very short, scarcely longer than those of the male, and rather thick. Tibia about two thirds of the length of the femur. Tarsus about equal in length to the tibia, densely clothed with scales; terminated by minute claws.

Four Hind Legs short, robust, thickly clothed with scaly hairs. Basal joint of the tarsus as long as all the rest united, armed beneath with a few minute spines.

ABDOMEN slender.

CATERPILLAR very short and thick, onisciform, thickly clothed with short hairs, with two long erect spines at the back of the head.

CHRYSLIS short, oval, obtuse, clothed with short hairs.

The majority of the species of this well marked genus are very plainly coloured on the upper surface of the wings, a few only being ornamented with broad shades of blue or purple. On the under side, however, they are much more variegated, especially on the hind wings, being generally marked with one or more transverse stripes of different rich colours, the apical portion of the wing being streaked with the same tints, and generally bearing a moderate-sized dark spot, often tinged with brilliant blue or purple near the middle of the outer margin, in the space between the second and third branches of the median vein. The hind wings vary in form in some of the species in which they are conically produced at the extremity next the anal angle. The very short third branch of the postcostal vein is the most characteristic distinction of the genus. In a species allied to *Gelanor* the postcostal vein has four branches, the third arising considerably nearer the apex of the wing than the tip of the discoidal cell, and the fourth very close to the tip. The same occurs also in a species with the hind wings long and very much angulated at the anal margin. All the species are natives of South America, where they appear to be extremely numerous. The caterpillar of *E. Midas*, according to Stoll, is brownish black, with a row of white dots along each side of the back, and a fringe of white hairs on each side above the legs; the segment behind the head is furnished with a tuft of red hairs. It was found on grass.

EURYGONA.

1. EURYG. EURITEUS.
Papilio Euriteus *Fabricius, Mant. Ins.* ii. p. 83. n. 751.,
Ent. Syst. iii. pt. 1. p. 321. n. 216.; *Cramer, Pap.* pl.
152. f. D. E.; *Godart, Enc. M.* ix. p. 568. n. 18.
(*Erycina Eur.*); *E. Doubleday, List Lep. Brit. Mus.*
pt. 2. p. 6.
Surinam, Para. B. M.
2. EURYG. MIDAS.
Papilio Midas *Fabricius, Mant. Ins.* ii. p. 79. n. 718.
(male), *Ent. Syst.* iii. pt. 1. p. 306. n. 162.; *Godart,*
Enc. M. ix. p. 567. n. 16.
Papilio Crotopus *Cramer, Pap.* pl. 390. f. G. H. (male)
pl. 336. f. E. F. (female); *Stoll, Suppl. Cram.* pl. 6.
f. 7. (caterp.) 7 F. (chrysalis).
(Male) *Scoptes Crotopus Hübner, Verz. bek. Schm.* p. 111.
n. 1201.
(Female) *Euselasia Crotope Hübner, Verz. bek. Schm.* p.
24. n. 175.
Guiana.
3. EURYG. GELANOR.
Papilio Gelanor *Cramer, Pap.* pl. 336. f. C. D.; *Godart,*
Enc. M. ix. p. 569. n. 23. (*Erycina G.*); *E. Doubleday,*
List Lep. Brit. Mus. pt. 2. p. 6. (*Eurygona G.*).
Erythia Gelanoria Hübner, Verz. bek. Schm. p. 24. n.
184.
Guiana, Brazil. B. M.
4. EURYG. ARBAS.
Papilio Arbas *Cramer, Pap.* pl. 379. f. L. M.; *Godart,*
Enc. M. ix. p. 569. n. 24.
Euselasia Arbas Hübner, Verz. bek. Schm. p. 24. n. 178.
Surinam.
5. EURYG. BIBULUS.
Hesperia Bibulus Fabricius, Ent. Syst. iii. pt. 1. p. 307.
n. 163.; *Jones, Icones,* vi. t. 39. f. 2.; *Donovan, Ins.*
of India, pl. 46. f. 1.
In Indiis (*Fabricius*).
B. M.
6. EURYG. CORNELIUS.
Papilio Cornelius *Fabricius, Ent. Syst.* iii. pt. 1. p. 220.
n. 689.; *Jones, Icones,* vi. pl. 49. f. 2.; *Donovan's*
Drawings in Bibl. Hope, Oxford; *Godart, Enc. M.* ix.
p. 493. n. 52. (*Satyrus C.*).
— ?
7. EURYG. MELAPHÆA.
Erythia Melaphæa Hübner, Verz. bek. Schm. p. 24. n.
185., *Zutrage, exot. Schm.* f. 209, 210.; *E. Doubleday,*
List Lep. Brit. Mus. pt. 2. p. 5. (*Eurygona Mel.*).
Brazil. B. M.
8. EURYG. ZARA.*
Eurygona Zara Hewitson MS.; Doubl. Westw. & Hewits.
Gen. D. Lep. pl. 71. f. 7.
South America.
9. EURYG. ORFITA.
Papilio Orfita *Cramer, Pap.* pl. 112. f. D. E. F.; *Godart,*
Enc. M. ix. p. 569. n. 22. (*Erycina O.*); *E. Doubleday,*
List Lep. Brit. Mus. pt. 2. p. 5. (*Eurygona O.*).
Euselasia Orfita Hübner, Verz. bek. Schm. p. 24. n. 177.
Para (Bengal; *Cramer*). B. M.
10. EURYG. PHEDICA.
Eurygona Phedica Boisduval, Sp. gén. Lep. pl. 21. f. B.
Cayenne.
11. EURYG. LABDACUS.
Papilio Labdacus *Cramer, Pap.* pl. 336. f. G. H.; *Godart,*
Enc. M. ix. p. 567. n. 14. (*Erycina L.*); *E. Doubleday,*
List Lep. Brit. Mus. pt. 2. p. 6. (*Eurygona L.*).
Erythia Labdaca Hübner, Verz. bek. Schm. p. 24. n. 183.
Guiana, Brazil. B. M.
12. EURYG. CATALEUCE.
Erythia Cataleuce Hübner, Zutrage exot. Schm. f. 207,
208.
Para.
13. EURYG. GEMELLUS.
Hesperia Gemellus Fabricius, Ent. Syst. iii. pt. 1. p.
319. n. 208. (male); *Jones, Icon.* vi. t. 36. f. 2.;
Godart, Enc. M. ix. p. 567. n. 15.; *Donovan, Natur.*
Repos. pl. 93.
Cayenne.
14. EURYG. TELECLUS.
Papilio Teleclus *Stoll, Suppl. Cram.* pl. 5. f. 4. 4 E.
Euselasia Telecta Hübner, Verz. bek. Schm. p. 24. n. 182.
Surinam.
15. EURYG. GELON.
Papilio Gelon *Stoll, Suppl. Cram.* pl. 5. f. 2. and 2 B.;
Godart, Enc. M. ix. p. 568. n. 19. (*Erycina G.*).
Euselasia Gelæna Hübner, Verz. bek. Schm. p. 24. n. 181.
Surinam.
16. EURYG. SABINUS.
Papilio Sabinus *Stoll, Suppl. Cram.* pl. 9. f. 3. 3 A.;
Godart, Enc. M. ix. p. 568. n. 20. (*Erycina S.*).
Euselasia Tenage Hübner, Verz. bek. Schm. p. 24. n. 179.
Surinam.
17. EURYG. HYGINIUS.
Papilio Hyginus *Stoll, Suppl. Cram.* pl. 9. f. 2. 2 B.;
Godart, Enc. M. ix. p. 568. n. 21. (*Erycina H.*).
Euselasia Hygenia Hübner, Verz. bek. Schm. p. 24. n. 176.
Surinam.
18. EURYG. LISIAS.
Papilio Lisias *Cramer, Pap.* pl. 152. f. F. G.; *E. Doubl.*
List Lep. Brit. Mus. pt. 2. p. 6.
Erycina Salimba Godart, Enc. M. ix. p. 568. n. 17.
Surinam, Brazil. B. M.
19. EURYG. THUCYDIDES.
Hesperia Thucydides Fabricius, Ent. Syst. iii. pt. 1. p.
323. n. 225.; *Jones, Icon.* vi. t. 6. f. 4.; *Donovan, Ins.*
of Ind. pl. 43. f. 1.; *Godart, Enc. M.* ix. p. 589. n.
121. (*Erycina Th.*); *E. Doubl. List Lep. Brit. Mus.*
pt. 2. p. 6. (*Eurygona Th.*).
Psalipteros Nycha Hübner, Zutr. exot. Schm. f. 279,
280.
Papilio Arisbas *Dalman, Anal. Ent.* p. 43.
West India, Brazil. B. M.
20. EURYG. OPALINA.
Eurygonia opalina Westw. MS.; nov. sp.†
Banks of the Amazon. Mus. Bates.

* "Upper side black; anterior wings shaded with purple chiefly at the base; posterior wings with a broad border of deep blue, the margin with white lunules. Beneath with the basal half of both wings light brown, surrounded (except where they touch each other) with orange, followed outwardly by belts of black and white alternately, three of each, separated midway on the anterior wings by one of orange, divided on the posterior by nervures of white. Expans. 1 $\frac{1}{2}$ inch." — *Coll. Hewitson.*

† *E. alis supra late aurantio-fulvis, certo situ coloribus opalinis undique nitidissimis, costaque anticarum pone medium anguste nigra, facie et corpore cum alis subtus albis; striga irregulari et valde interrupta pone medium e lineis vel punctis parvis testaceis, strigaeque vel nubila undata obscuriori vix distincta, serieque lunularum minimarum submarginalium nigrarum. Expans. alar. antic. unc. 1 $\frac{1}{3}$.*

Genus XIX. THEOPE.

THEOPE *E. Doubleday.*
 PSALIDOPTERIS *Hübner.*

BODY robust: wings generally blue, with the costa and apical margin black, (facies of *Polyommatus*); beneath pale, uniformly dull-coloured; alike in both sexes.

HEAD moderate-sized, clothed with close adpressed hairs.

Eyes moderate-sized, naked.

Labial Palpi clothed with scales, obliquely elevated to about the level of the middle of the eye. The basal joint short and curved; terminal joint nearly half the length of the middle one, very slender, cylindrical, and horizontal.

Antennae rather more than half the length of the fore wings, very slender; articulations short, slightly annulated with white; terminated by an elongate, gradually formed, slender club, obtuse at the tip.

THORAX robust, short, scaly, except at the sides and behind.

Fore Wings broad, generally with the inner margin considerably elongated, so that the wing is truncate along the apical margin. Costal margin much arched at the base, slightly emarginate along the middle; apical angle often acute. Apical margin entire, more or less convex. Inner margin straight. Costal vein short, suddenly bent forward at its apex. Postcostal vein with the first and second branches arising before the anterior extremity of the discoidal cell: sometimes the first branch is confluent with the costal vein for a short distance, in which case the extremity of the first branch is thickened, and assumes the appearance of the termination of the costal vein itself; third branch arising half way between the cell and the apex of the wing. Upper disco-cellular vein extremely minute, not oblique: middle and lower disco-cellular veins very slender, transverse, of nearly equal length; the lower one uniting with the third branch of the median vein, a short distance beyond its origin, closing the discoidal cell in a transverse direction at about half the length of the wing.

Hind Wings variable in form, but generally broad, and truncated along the outer margin, which is always entire, and not scalloped; the anal angle occasionally produced. Costal vein extending nearly to the outer angle. Precostal strong, oblique, and directed outwardly. Postcostal arising much nearer the body than the precostal; branched at a moderate distance from its base. Upper disco-cellular arising at a very short distance beyond the branch, transverse, but slightly oblique, of nearly equal length with the outer disco-cellular, both being very slender; the latter uniting with the third branch of the median vein.

Fore Legs of the male very small, and slender, fringed on each side with short hairs. *Fore Legs* of the female also very short, slender, scaly. The tarsal portion with strong spines at the extremity of the articulations.

Four Hind Legs long, slender, scaly. Tarsal claws minute.

This genus comprises a number of species, mostly undescribed, which have a very strong general resemblance, on the upper side of the wings, to many of the common blue *Lycaenidae*; the costa and apex of the fore wings, and costal margin of the hind wings, being black, with the rest of the wings pale bright blue. From many of the preceding genera of this family, they are distinguished by their much longer palpi, and their broad truncated fore wings.

THEOPE.

1. THEOPE *LYTAEA*.

Psaliapteris Lytæa *Hübner, Zutrage exot. Schm. f. 901, 902.*
 Brazil.

182.; *E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 6.*
 (Theope T.).

Brazil, Java (Godart).

B. M.

2. THEOPE *TERAMBUS*.

Polyommatus Terambus *Godart, Enc. M. ix. pt. 676. n.*

3. THEOPE *EUDOCIA*.

Theope Eudocia *E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 6.; Doubl. Westw. & Hewits, Gen. D. Lep. pl. 70. f. 4.*

Para.

B. M.

Genus XX. PANDEMOS.

PANDEMOS *Hübner*.PANDEMOS, THEOPE p., EURYGONA p., *E. Doubleday*.ERYCINA p. *Godt*.

BODY elongate: wings large, uniformly and plainly coloured, especially beneath.

HEAD small, finely hairy, scarcely tufted.

Eyes naked.*Antennæ* short, scarcely more than half the length of the fore wings, very slender; articulations indistinct, not ringed with white; terminated by a large, gradually formed, but slender club, pointed at the tip.*Labial Palpi* very scaly, porrected obliquely; the tip considerably in front of the hairs of the head, and elevated to the middle of the eyes; terminal joint slender, more or less conical, subhorizontal.

THORAX moderate-sized, scaly.

Fore Wings large, elongate-triangular. Costal margin nearly straight; apical angle subacute. Apical margin slightly convex, entire, three fourths of the length of the costal. Inner margin nearly straight, of equal length with the apical; veins arranged nearly as in Theope. The postcostal vein rather wide from the costa; second and third branches of the postcostal free, arising before the anterior extremity of the discoidal cell. Upper disco-cellular almost obsolete, extremely short, but oblique; middle and lower ones very slender, much longer, of nearly equal length, transverse, closing the discoidal cell transversely about the middle of the wing. Upper discoidal arising at the junction of the upper and middle disco-cellulars; the lower disco-cellular uniting with the median vein close to the origin of its third branch.*Hind Wings* variable in shape, oval or subtrigonal. Costal margin arched, outer margin entire. Precostal vein oblique. Costal vein extending to about two thirds of the length of the costa. Postcostal branching at a considerable distance from the base. Upper and lower disco-cellulars very slender, transverse, of nearly equal length; the former arising close beyond the branch of the postcostal vein, and the latter uniting with the median close to the origin of its third branch.*Fore Legs* of the male very small, slender, and not very thickly hairy. *Fore Legs* of the female much more elongated, scaly. Tibiæ and tarsi with short spines beneath.*Four Hind Legs* slender, scaly, slightly spined beneath. Tarsi elongated.

ABDOMEN elongated.

The insects composing the group are very closely allied to Theope; from which they chiefly differ in the more triangular form of the fore wings, the oval or subtrigonal hind wings, and the style of colouring, which is uniform and simple. The typical species, *P. Arcas*, is of a very pale obscure blue, slightly dusky along the tips, with a few ill defined whitish spots beyond the middle of the wing; the hind wings bear a large black spot in the middle of the costa, followed by a white one; beneath the colouring is still more simple; the fore wings being dirty brownish white, with similar markings; and the hind ones bluish white, unspotted. I have added to this genus *Papilio Lagus*, although differing in the more triangular form of all the wings, and the rich purple gloss with which they are almost entirely suffused on the upper side: in the arrangement of the wing veins, however, and the plain colouring of their under surface, it does not materially differ from *P. Arcas*. For the same reason, the undescribed species named by Mr. E. Doubleday *Eurygona*? *Cydon* must also be added to the genus.

The beautiful species represented in our Plate LXX. f. 5. differs from all the preceding in its bright sulphur colour, and the slender golden line running close to the outer margin of all the wings.

PANDEMOS.

1. PAND. ARCAS.

Papilio Arcas Fabricius, Ent. Syst. iii. pt. 1. p. 157. n. 483. ; Cramer, Pap. pl. 179. f. E. F. ; Godart, Enc. M. ix. p. 569. n. 25. ; E. Doubl. List Lep. Brit. Mus. pt. 2. p. 7. (Pandemos A.) ; Hübner, Verz. bek. Schm. p. 25. n. 192. (Pandemos Arcassa).
Surinam, Brazil. B. M.

M. ix. p. 680. n. 195. (Polyomm. L.) ; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 6. (Theope L.).
Pandemos Lagis Hübner, Verz. bek. Schm. p. 25. n. 193.
Surinam, Para. B. M.

2. PAND. LAGUS.

Hesperia Lagus Fabricius, Ent. Syst. iii. pt. 1. p. 300. n. 159. ; Cramer, Pap. pl. 117. f. F. G. ; Godart, Enc.

3. PAND. AREUTA.

Pandemos Areuta Boisduval MS. ; E. Doubleday, List Lep. Brit. Mus. pl. 2. p. 7. ; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 70. f. 5.
Pernambuco. B. M.

Genus XXI. MESENE.

MESENE *Boisduval MS., E. Doubleday.*
 EMESIS and LEMONIADES *MACULATÆ p. Hübner.*
 ERYCINA *p. Godt.*

BODY rather long and slender. Butterflies of small size, gaily coloured, often of a red colour, with dark margins to the wings. Males with the fore wings more elongate-triangular than the females.

HEAD small, finely hairy; rather broader in the males.

Eyes rather large, naked.

Antennæ very slender, rather more than half the length of the fore wings, finely annulated with white; terminated by a distinct, not much elongated, gradually formed club, bent inwards, the apex subobtuse.

Labial Palpi minute, compressed, curved at the base, the apex but slightly porrected beyond the hairs of the face, finely hairy beneath; the tip rather acute.

THORAX short, oval.

Fore Wings rather large: those of the males more elongated and subtriangular; those of the females more ovate-triangular, with the apical margin convex. Costal margin scarcely arched; apical angle subobtuse. Costal vein extending to about the middle of the costa. Postcostal vein with three branches; the first and second arising near together, before the anterior extremity of the discoidal cell, the continuation of the postcostal being slightly angulated at the extremity of the cell; third branch arising about halfway between the cell and the apex of the wing. Upper disco-cellular vein either obsolete or very short: middle and lower disco-cellulars of nearly equal length, very slender, transverse, closing the cell at about half the length of the wing, uniting with the third branch of the median vein at a little distance beyond its origin.

Hind Wings triangular-ovate. Outer margin rounded, entire; anal angle sometimes slightly angulated. Costal vein extending to about two thirds of the length of the costa. Precostal short, oblique, directed outwards. Postcostal arising much nearer the wing than the precostal, curved at the base, branching at a moderate distance from the base. Upper disco-cellular oblique, arising at a short distance beyond the base of the postcostal branch: lower disco-cellular rather longer than the upper one, transverse, uniting with the third branch of the median vein, at a short distance beyond its origin, closing the discoidal cell near the middle of the wing.

Fore Legs of the male moderately short, and moderately clothed with long stiff hairs. Femur short. Tibia and tarsus of nearly equal length, and simple. *Fore Legs* of the female not much longer than those of the male, slender, and scaly. Coxa elongate. Femur considerably longer than the tibia, which is scarcely so long as the tarsus, which is well articulated; the two terminal joints gradually attenuated.

Four Hind Legs moderately long, slender, and scaly. Femur of the middle legs longer than that of the hind legs, and curved. Tibiæ rather thickened in the middle. Ungues and their appendages minute, and covered above by the projecting scales of the last joint of the tarsus.

ABDOMEN small and elongated.

This is a genus of small pretty species, the ground colour of the wings of which is generally red or orange, with dark-coloured borders, varying in width. The females have the extremity of the fore wings not so much elongated as the males, so that they are of a more ovate form in the former sex. In *M. Pharca* the wings of both sexes on the upper side are coloured alike, but on the under side the male has nearly the whole of the fore wings of a brown colour; whereas in the female both sides of the wing are nearly alike. *Papilio Telephus* of Cramer, which is also referred to this genus, differs in the male having the wings above black, the fore ones spotted with white, and the hind ones with a broad orange central fascia; whereas the insect which appears to me to be its female (and which agrees with it in the markings of its under surface, except that it has the hind wings not so strongly marked with bluish grey,) has the ground colour of the wings above orange dotted with black, the fore wings being marked with white, as in Cramer's male, the outer half being black, and the hind wings with a narrow irregular dark border. Some slight variation also occurs in the species in respect to the place of insertion of the upper disco-cellular vein (and, consequently, in the direction of the slender veins closing the discoidal cell), the upper disco-cellular sometimes arising close to the second postcostal branch, and in other species further from it. In others, also, the first branch of the postcostal vein anastomoses for a very short distance with the costal vein, and is then thrown off to its usual extent. I am acquainted with about a dozen species referable to this genus.

MESENE.

1. MES. PHAREA.

- Papilio Phareus Fabricius, Mant. Ins.* ii. p. 79. n. 722.,
Ent. Syst. iii. pt. 1. p. 308. n. 161.; *Cramer, Pap.* pl.
 170. f. C. (male); *Godart, Enc. M.* ix. p. 587. n. 114.
 (Erycina Ph.); *Hübner, Verz. bek. Schm.* p. 22. n. 159.
 (Emesis Ph.); *Hübner, Samml. exot. Schm.* Band 1.
 pl. —. (Limnas Ph.); *E. Doubleday, List Lep. Brit.*
Mus. pt. 2. p. 7. (Mesene Ph.)
 (Female) *Papilio Bomilcar Stoll, Suppl. Cramer, Pap.* pl.
 39. f. 3.
Emesis Bomilcar Hübner, Verz. bek. Schm. p. 22. n. 158.
 Guiana, Brazil. B. M.

2. MES. EPAPHUS.

- Papilio Epaphus Cramer, Pap.* pl. 335. f. D. E.
Erycina Epalia Godart, Enc. M. ix. p. 588. n. 116.
Emesis Epaphe Hübner, Verz. bek. Schm. p. 22. n. 160.
Emesis Epalia Hübner, Zutrage exot. Schm. f. 921, 922.
 Guiana, Brazil.

3. MES. MENETAS.

- Papilio Menetas Drury, Illustr.* iii. pl. 8. f. 3.; *Stoll,*
Suppl. Cram. pl. 30. f. 4.
Emesis Menetis Hübner, Verz. bek. Schm. p. 22. n. 161.
Hesperia Tacitus Fabricius, Ent. Syst. iii. pt. 1. p. 308.
 n. 168.; *Jones, Icon.* vi. t. 46. f. 3.; *Donovan, Nat.*
Repos. iv. pl. 134.; *Godart, Enc. M.* ix. p. 588. n.
 115. (Erycina T.).
 Guiana, Brazil.

4. MES. TIMANDRA.

- Erycina Timandra Godart, Enc. M.* ix. p. 585. n. 100.
 Brazil.

5. MES. ZACHEUS.

- Hesperia Zacheus Fabricius, Ent. Syst.* v., *Suppl.* p. 431.
 n. 231—232.; *Godart, Enc. M.* ix. p. 585. n. 101.
 (Erycina Z).
 (An Mes. Timandra mas?)
 Cayenne.

6. MES. AGRIUS.

- Papilio Agrius Dalman, Anal. Ent.* p. 46. n. 18.
 Brazil.

7. MES. TELEPHUS.

- Papilio Telephus Fabricius, Mant. Ins.* ii. p. 78. n. 710.,
Ent. Syst. iii. pt. 1. p. 304. n. 153.; *Cramer, Pap.* pl.
 66. f. E. F.; *Godart, Enc. M.* ix. p. 587. n. 112.
 (Erycina T.); *E. Doubleday, List Lep. Brit. Mus.* pt.
 2. p. 7. (Mesene T.).
Lemonias maculata Alphæa Hübner, Samml. exot. Schm.
 Band 1. pl. —.; *Hübner, Verz. bek. Schm.* p. 19. n.
 124. (Echenais Alph.).
 South America, Para. B. M.

8. MES. HYA.

- Mesene Hya Boisduval MS.; E. Doubl. List Lep. B.*
Mus. pt. 2. p. 7.; *Doubl. Westw. & Hewits. Gen. D.*
Lep. pl. 70. f. 9.
 Brazil. B. M.

Genus XXII. PANARA.

PANARA *E. Doubleday, List Lep. Brit. Mus.*
 HESPERIA *p. Fabricius.*

BODY robust: wings elongate, with a transverse bar of orange colour.

HEAD transverse, clothed with short hairs.

Eyes large, naked.

Antennæ rather less than three fifths of the length of the fore wings, slender; articulations indistinct, not annulated with white; terminated by a long, gradually formed, moderately robust club.

Labial Palpi slender, short, elevated obliquely to more than one third of the height of the eye, scarcely extending in front beyond the hairs of the face, much curved at the base, and clothed beneath at the base with short hairs; the last joint minute and conical.

THORAX robust, clothed with short hairs at the sides.

Fore Wings elongate, subtriangular. Costal margin slightly arched; apical portion more strongly curved; apical angle obtuse. Apical margin more than two thirds of the length of the costal, slightly convex. Inner margin not more than two thirds of the length of the apical. Postcostal vein with three branches: the first arising before the anterior extremity of the discoidal cell; the second at a considerable distance beyond the cell; and the third at about the same distance beyond the second as the second is from the cell. Upper disco-cellular vein obsolete: middle one arising at a short distance beyond the cell, its apex directed towards the base of the wing: outer disco-cellular equally slender, curved near its base, its lower end directed outwards, rather longer than the middle disco-cellular, and uniting with the third branch of the median vein at a short distance beyond its origin.

Hind Wings elongate, subovate. Costa much rounded at the base. Outer margin regularly rounded. Anal margin forming a slight groove for the abdomen. Costal vein extending to about two thirds of the costa.

Precostal oblique, directed outwards obliquely. Postcostal arising much nearer the base of the wing than the precostal, rather curved near the base, branching at a moderate distance from the base. The upper disco-cellular arising at a very short distance beyond the branch, transverse, very slender, as well as the lower disco-cellular, which is in the same line as the former, closing the cell transversely, and uniting with the third branch of the median vein close beyond its origin.

Fore Legs of the male very short, slender, and densely hairy.

Four Hind Legs slender, scaly. Femora finely hairy beneath. Tibiæ and tarsi finely spined beneath. Claws and their appendages very minute.

ABDOMEN robust, elongate-conical.

In addition to the character derived from the colouring of the insects of this genus (the types of which are black, the under side having a brilliant purple gloss, especially along the apical margin, the fore wings, and in *P. Iarbas* the hind ones also, traversed by an orange fascia,) they are distinguished from the immediately preceding and following genera by the postcostal vein of the fore wings having only the first branch emitted before the anterior extremity of the discoidal cell, the second and third being at equal distances apart beyond it, and the cell of the hind wings being closed transversely by the upper and lower disco-cellular veins.

P. Satnius (if I am correct in the identification of Dalman's insect) scarcely belongs to the genus, having shorter and more rounded wings, with the postcostal vein of the fore wings emitting its second as well as first branch before the anterior extremity of the cell. It agrees with the other species, however, in its colours and markings.

PANARA.

1. PAN. IARBAS.

Papilio Iarbas Drury, Ill. iii. pl. 8. f. 2.; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 8. (Panara I.).
Hesperia Perditus Fabricius, Ent. Syst. iii. pt. 1. p. 323. n. 222.; Godart, Enc. M. ix. p. 590. n. 127. (Erycina P.); Hübner, Samml. exot. Schm. Band II. pl. —, Verz. bek. Schm. 22. n. 162. (Erycina P.).
 Guiana, Brazil. B. M.

2. PAN. BARSACUS.

Panara Barsacus Westw. MS. n. sp.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 72. f. 10.*
 Banks of the river Amazon. Mus. Saunders.

3. PAN. ? SATNIUS.

Papilio Satnius Dalman, Anal. Ent. p. 45.; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 8. (Panara S.).
 Brazil. B. M.

Genus XXIII. AMARYNTHIS.

AMARYNTHIS *Hübner, E. Doubleday.*

ERYCINA *p. Godt.*

BODY moderately robust. Butterflies of small size, with the ground colour of the wings black, varied with red and orange marks, and occasionally with white dots.

HEAD small, clothed with fine hairs, and slightly tufted on the crown.

Eyes prominent, naked.

Antennæ slender, about half the length of the fore wings; articulations indistinct; terminated by an elongated, rather slender, gradually formed, and slightly incurved club.

Labial Palpi small, compressed, much curved at the base, the tip not elevated more than one fourth of the height of the eye, rather thickly clothed beneath with divergent hairs; tip gradually acuminate, not extending so far as the hairs of the face.

THORAX rather robust, finely hairy.

* *P. alis elongatis supra fusco-nigris, anticarum disco nigricanti, fascia obliqua recta fulva e medio costæ ad angulum posticum extensa (margines non attingente), posticarum incisuris versus angulum analem albo parum notatis; alis infra concoloribus, dimidio externo omnium purpureo nitidis.* Exp. alar. antic. unc. 1½.

Fore Wings rather large, subtrigonal. Costal margin arched at the base, straight, or slightly emarginate in the middle, rounded at the apical angle. Apical margin nearly straight in the males, more convex in the females. Postcostal vein with three branches; the first and second emitted before the anterior extremity of the discoidal cell, the third about half way between the cell and the tip. Upper disco-cellular obsolete: middle and lower ones of nearly equal length, slightly curved; the former arising just beyond the origin of the second branch of the postcostal, and the lower uniting with the third branch of the median shortly beyond its origin: upper discoidal branching from the postcostal at a little distance beyond the discoidal cell.

Hind Wings subtrigonal; those of the females more ovate and more regularly rounded on the outer margin, which is entire. Costal margin well arched, the base moderately rounded. Costal vein extending three fourths of the length of the costa. Precostal directed obliquely forwards, and forked at its extremity. Postcostal much nearer the body than the precostal, branching at a moderate distance from its base. Upper disco-cellular arising at a very short distance beyond the branch of the postcostal, very slender, transverse: lower disco-cellular similar to the upper one, but rather longer, following the same direction, closing the discoidal cell transversely by its junction with the third branch of the median vein at a very short distance from its origin.

Fore Legs of the males very small, slender, and densely clothed with long fine hairs. Femur very short. *Fore Legs* of the female nearly twice as long as those of the male, slender, scaly. Femur considerably longer than the tibia, which is scarcely so long as the tarsus; the latter with the middle joints rather the thickest, each armed beneath with slender spines at the tip as long as the joint itself.

Four Hind Legs rather long, slender, scaly. Femora clothed beneath with moderately long hairs, those of the middle legs more elongated. Tibia slender beyond the middle. Tarsi as long as the tibiæ, the joints armed beneath at the tips with short spines. Claws and appendages short.

ABDOMEN moderately elongate, marked with the same colours as the wings.

The pretty butterflies composing this genus differ from the *Panaræ* in the first and second branches of the postcostal vein of the fore wings arising before the extremity of the discoidal cell, as well as in the less elongated hind wings, and less robust bodies; the abdomen being marked with spots of the same colour as those of the fasciæ ornamenting the wings, the ground colour of which is a rich velvety black. In general form they more nearly resemble the species of *Mesene*. *A. Sagaris* differs from the two typical species in having the orange-coloured fascia reduced in the fore wings to a triangular patch on the inner margin, and in wanting the white dots with which the others are ornamented.

AMARYNTHIS.

1. AMAR. MENERIA.

Papilio Meneria Cramer, *Pap.* pl. 94. f. D. E. (male);
Godart, Enc. M. ix. p. 591. n. 131. (*Erycina* M.);
Hübner, Verz. bek. Schm. p. 26. n. 204. (*Amarynthia*
 M.); *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 8.
 (*Amarynthia* M.); *Doubleday, Westw. & Hewits. Gen.*
D. Lep. pl. 70. f. 7.
Hesperia Mæcenæ Fabricius, *Ent. Syst.* iii. pt. 1. p. 306.
 n. 160.
 Surinam, Guadeloupe, Cayenne. B. M.

List Lep. Brit. Mus. pt. 2. p. 8. (*Amarynthia*
 M.).
 Bolivia. B. M.

2. AMAR. MICALIA.

Pap. Micalia Cramer, *Pap.* pl. 94. f. F.; *E. Doubleday,*

3. AMAR. ? SAGARIS.

Papilio Sagaris Fabricius, *Mant. Ins.* ii. p. 83. n. 750.,
Ent. Syst. iii. pt. 1. p. 321. n. 215.; *Cramer, Pap.*
 pl. 83. f. D.; *Godart, Enc. M.* ix. p. 589. n. 123.
 (*Erycina* S.); *E. Doubleday, List Lep. Brit. Mus.* pt.
 2. p. 8. (*Amarynthia* ? S.).
Hesperia Sagaris Hübner, *Verz. bek. Schm.* p. 25. n. 197.
 Guiana, Brazil. B. M.

Genus XXIV. SYMMACHIA.

SYMMACHIA Hübner, *E. Doubleday.*
 CARIA Hübner.

BODY small, moderately robust, size small: fore wings with the costal margin strongly curved at the base, emarginate in the middle; hind wings subtriangular.
 HEAD small, clothed with closely adpressed scaly hairs.

Eyes moderate-sized, naked.

Antennæ very slender, about three fifths of the length of the fore wings; articulations indistinct, not ringed with white; terminated by a rather short and moderately robust club, gradually formed, obtuse at the tip.

Labial Palpi very small, compressed, directed obliquely upwards, but not reaching higher than one fourth of the length of the eye, and not extending so far as the hairs of the face, clothed beneath with short scaly hairs; apex subacute.

THORAX rather robust, clothed with scaly hairs.

Fore Wings large, subtriangular. Costal margin very convex at the base, deeply emarginate in the middle; apex rounded. Apical margin but slightly convex in the males, more dilated in the females. Postcostal vein emitting the first and second branches before the anterior extremity of the discoidal cell, and the third branch half way between the cell and the apex. Upper disco-cellular vein arising at a moderate distance beyond the second branch of the postcostal, and forming, as it were, the base of the upper discoidal vein: middle disco-cellular arising at a short distance from its origin, very slender, transverse, slightly curved at its lower end: lower disco-cellular about the same length as the middle one, equally slender, but straight and transverse, uniting with the third branch of the median vein at a moderate distance from its origin.

Hind Wings subtriangular, each angle occasionally produced into an obtuse point; base of the costa strongly angulated. Costal vein extending about three fourths of the length of the costa. Precostal vein oblique, nearly reaching to the costa, and acuminate at the tip. Postcostal vein arising much nearer the body than the precostal, branching at a moderate distance from the base. Upper disco-cellular very slender, oblique, arising at a very short distance from the base of the branch of the postcostal: lower disco-cellular also very slender, rather longer than the upper one, but transverse, uniting with the third branch of the median vein at a short distance from its origin.

Fore Legs of the male very slender, longer in proportion to the size of the insects than ordinary, loosely clothed with long slender hairs. Tarsus and tibia of equal length. Femur short. *Fore Legs* of the female slender, scarcely longer than those of the male, scaly. Femur and tarsus of equal length, each longer than the tibia. Tarsal joints not spined beneath.

Four Hind Legs of the ordinary proportions, slender, scaly. Tarsal joints armed beneath with numerous short spines.

ABDOMEN moderately elongate in the males; ovate in the females.

The insects of this genus are amongst the prettiest of the present family, from almost all the species of which they are distinguished by the peculiar shape of the fore wings, which do not differ, as to the form of the costa, in the opposite sexes. The females, however, as usual, have the apical margin more convex, especially towards the hinder angle, than in the males. *S. Colubris* is remarkable for having the wings powdered with glittering green and silvery atoms on the upper surface, whilst the males of *S. Probetrix* and *S. Accusatrix* have the hind wings marked with a wide band of orange red along the costal margin.

SYMMACHIA.

1. SYMM. COLUBRIS.

Caria Colubris Hübner, *Zutrage exot. Schm.* f. 251, 252; ;

E. Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 8.

Erycina Argiope Godart, *Enc. M.* ix. p. 573. n. 44.

Papilio Paridion Dalm. *Anal. Ent.* p. 44.

Brazil.

B. M.

2. SYMM. PRAXILA.

Symmachia Praxila *E. Doubleday*, *List Lep. Brit. Mus.*

pt. 2. p. 8; *Doubleday*, *Westw. & Hewits. Gen. D. Lep.*

pl. 73. f. 1.

Rio Janeiro.

B. M.

3. SYMM. ACCUSATRIX.

Symmachia Accusatrix *Westw.* nov. sp.*

Para.

Mus. Bates.

4. SYMM. PROBETRIX.

Papilio Probetor *Cramer*, *Pap.* pl. 390. f. 1.; *Godart*,

Enc. M. ix. p. 590. n. 125. (*Erycina* Pr.); *Hübner*,

Verz. bek. Schm. 26.; *E. Doubleday*, *List Lep. Brit.*

Mus. pt. 2. p. 8. (*Symmachia* P.).

Symmachia Probetrix *Hübner*, *Verz. bek. Schm.* p. 26. n. 202.

Surinam, Para.

B. M.

5. SYMM. JURATRIX.

Symmachia Juratrix *Westw.* nov. sp.†

Para.

Mus. Bates.

6. SYMM. DOMITIANUS.

Hesperia Domitianus *Fabricius*, *Ent. Syst.* iii. pt. 1. p.

315. n. 193.; *Godart*, *Enc. M.* ix. p. 573. n. 45.; *E.*

* *P. alis supra maris fusco-nigris cyaneo parum nitidis: fœminæ fuscis, versus basin guttis variis luteis; anticis macula conoidea sub-basali strigaeque abbreviata apicali rufis; anticis etiam in utroque sexu basi purpureis, plaga conica ad medium costæ strigisque septem hastatis magnitudine variis subapicalibus albo-subhyalinis; posticis maris costa late testacea; alis infra fuscis, maris albo, fœminæ luteo-albido variis.* *Expans. alar. antic. unc. 1—1½.* *S. Praxila* affinis.

† *P. alis supra fuscis macula triangulari ad medium costæ albida, dimidio interno guttis numerosis obscure rufis; posticis testaceo-castaneis margine interno, angulo anali punctisque paucis submarginalibus fuscis, thorace utrinque abdomineque rufis: alis infra fuscis albido obscure tessellatis puncto nigro versus angulum analem.* *Expans. alar. antic. ¾ unc.*

Doubleday, List Lep. Brit. Mus. pt. 2. p. 8. (Symmachia D.).
Guadaloupe, Venezuela B. M.

7. SYMM. PLUTARGUS.

Hesperia Plutargus Fabricius, Ent. Syst. III. pt. 1. p. 329.
n. 251.; *Jones, Icones*, VI. t. 75. f. 1.; *Donovan, Ins.*

of India, pl. 48. f. 3.; *Godart, Enc. M.* IX. p. 776. n. 130. (*Hesperia Pl.*).
"In Indiis" (Fabricius).

8. SYMM. TROCHILUS.

Caria Trochilus Erichson in Schomburgh, Reise N. Guiana, 3 Th.
Guiana.

Genus XXV. EMESIS.

EMESIS *Fabricius, Ent. Gloss.* (but not of Boisduval).
POLYSTICHTIS, APHACITIS, and GONOPTERIS p., *Hübner*.
NYMULA and NYMPHIDIUM p. *Boisduval, Blanchard*.

BODY elongate: fore wings (especially in the males) elongate-triangular, pointed at the tip, broader in the females, paler coloured beneath than above, and much varied with interrupted transverse lines.

HEAD small, broadest in the males, finely hairy.

Eyes prominent, lateral, naked.

Labial Palpi very small (especially in the females), compressed, obliquely ascending, the tip being about level with the middle of the eye, but not extending beyond the hairs of the face; terminal joint very small, nearly naked, and pointed.

Antennæ about three fifths of the length of the fore wings, slender; joints almost indistinct, slightly annulated with white; club gradually formed, elongated, moderately robust, pointed at the tip.

THORAX moderately robust, finely hairy.

Fore Wings large, elongate-triangular; apex more or less acute, especially in the males. Costal margin nearly straight, except at the tip. Apical margin entire, slightly convex (rather emarginate towards the tip in those males, which have the tip more acute). Inner margin nearly equal in length to the apical. Costal vein reaching rather beyond the middle of the margin. Postcostal with only three branches; the first and second arising before the anterior extremity of the discoidal cell (the second one more or less nearly approaching it), and the third branch arising at a considerable distance beyond the cell, and uniting with the costa at about eight ninths of the length of the wing; the terminal part of the postcostal vein itself reaching to the tip of the wing. Upper disco-cellular vein extremely short, or obsolete; when present it arises at about the middle of the wing; upper discoidal arising at its lower end (or if obsolete) from the postcostal vein in the place of the upper disco-cellular: middle and lower disco-cellular nearly equal in length, very slender, rather varying in direction, the latter uniting with the third branch of the median vein at a very short distance beyond its origin.

Hind Wings subtriangularly ovate in the male, more broadly triangular-ovate in the female. Costal margin slightly convex; outer angle rounded. Outer margin entire, not much rounded; anal angle rather acute. Costal vein extending to about three fourths of the length of the costa. Postcostal arising much nearer the body than the precostal. Upper and lower disco-cellular veins very slender, transverse; the former arising at a short distance beyond the branching of the postcostal, and the latter close beyond the origin of the third branch of the median vein.

Fore Legs of the male small, densely hairy, simple; those of the female about twice the length of those of the male, very slender, scaly. Tarsus longer than the tibia; joints armed with small spines beneath at the tips.

Four Hind Legs large, slender, scaly, those of the males with the femora more hairy beneath, tibiae and tarsi slightly spined beneath.

ABDOMEN elongate in the males, shorter and more ovate in the females.

The small size of the labial palpi will at once distinguish the species of this genus from those of *Nymphidium* and *Aricoris*, to which they are somewhat allied. Some variation exists in the form of the fore wings of the different species, as well as in the sexes of the same species, and even, as I believe, in individuals of the same sex; thus some specimens of *E. Lucinda* have the fore wings scarcely pointed, whilst in others of a rather larger size they are, in both sexes, considerably more acute at the tip. Notwithstanding this difference, I apprehend all these individuals belong to one species, the females of which are, I believe, identical with Cramer's *P. Dyndima*. The type of the genus, as constituted by Fabricius in the *Systema Glossatorum*, is the *E. Ovidius*, a pretty species, which is more striking in the form of its fore wings, which approach those of *Symmachia*, being emarginate along the costal margin, and by

their being marked with numerous golden patches. This species has been confounded by Cramer and Godart with another species which is destitute of these golden markings, regarding the latter as the female. I have now before me, however, both sexes of the species without the golden spots, and a female of *E. Ovidius* with them. There are various undescribed species in our collections, in addition to those mentioned below.

EMESIS.

1. EMESIS OVIDIUS.

Emesis Ovidius Fabricius, Syst. Glossatorum.

Hesperia Ovidius Fabricius, Ent. Syst. iii. pt. 1. p. 320. n. 212. (male); Jones, Icon. vi. pl. 39. f. 4.; Donovan, Ins. India, pl. 46. f. 7.; Godart, Enc. M. ix. p. 571. n. 35. (Erycina Ov.); Doubl. Westw. & Hewits. Gen. D. L. pl. 72. f. 6.

Papilio Fatima Cramer, Pap. pl. 271. A. B. (male); E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 9. (Emesis F.).

Polystichtis Cerea Hübner, Verz. bek. Schm. p. 18. n. 109. excl. syn. P. Cænei (errore Cerei) Linn.

West Indies, Para. B. M.

2. EMESIS ARMINIUS.

Papilio Arminius Fabricius, Ent. Syst. iii. pt. 1. p. 155. n. 478.; Jones, Icon. vi. pl. 32. f. 4.; Godart, Enc. M. ix. p. 571. n. 34. (Erycina Arm.); E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 9. (Emesis Arm.).

Erycina Ops Latreille in Humboldt, Obs. Zool. & Anat. ii. p. 89. pl. 27. f. 3, 4. (male).

Papilio Mandana Cramer, Pap. pl. 271. f. E. F. ?

Polystichtis Mandane Hübner, Verz. bek. Schm. p. 18. n. 111.

Brazil, Venezuela. B. M.

3. EMESIS FATIMELLA.

Fatimella Westw. MS.

Pap. Fatima Cramer, Pap. pl. 271. f. C. D.

Brazil, Amazon. B. M.

4. EMESIS LUCINDA.

Papilio Lucindus Fabricius, Mant. Ins. ii. p. 30. n. 319., Ent. Syst. iii. pt. 1. p. 154. n. 476.; Jones, Icones, vi. t. 32. f. 3.; Cramer, Pap. pl. 1. f. E. F.; Godart, Enc. M. ix. p. 571. n. 32.; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 9. (Emesis L.); Hübner, Verz. bek. Schm. p. 18. n. 112. (Polystichtis L.).

Guiana, Brazil, Venezuela. B. M.

5. EMESIS DYNDIMA.

Papilio Dyndima Cramer, Pap. pl. 271. f. G. H.; Godart, Enc. M. ix. p. 407. and 571. n. 33. (Erycina D.).

Aphacitis D. Hübner, Verz. bek. Schm. p. 19. n. 130. (An Lucinda fem. ?)

Surinam.

6. EMESIS PERGÆA.

Gonopteris Pergæa Hübner, Zutrage, exot. Schm. f. 747, 748.

Brazil.

7. EMESIS GNOSIS.

Nymula Gnosis Boisduval, Sp. gén. Léop. pl. 20. f. 4.

Cayenne.

8. EMESIS MONOSTIGMA.

Emesis monostigma Erichson in Schomburgh, Reise n. Guiana, 3 Th.

Guiana.

Genus XXVI. NYMPHIDIUM.

NYMPHIDIUM Fabricius (Syst. Gloss.), E. Doubleday, but not of Boisduval.

DESMOZONA Boisduval, Blanchard.

PEPLEA, SYNARGIS p., THISBE p., and ADELPHIA p., Hübner.

EMESIS p. and TYANITIS E. Doubleday.

HYPOPHYLLA Boisduval.

BODY long, slender: wings large, delicate in texture, generally marked with a large white patch occupying the greater part of the hind wings and portion of the disc of the fore ones.

HEAD small, widest in the males, slightly tufted in the middle below the antennæ.

Eyes large, lateral, naked.

Labial Palpi long, slender, those of the females being generally considerably longer than those of the males, porrected obliquely, elevated to the level of the top (or nearly so) of the eyes, and extending considerably in front of the face, compressed, scaly; the middle joint long, and of equal width throughout; the terminal joint very slender, naked, filiform, varying in length according to the sex, being in the females nearly half the length of the second joint, but shorter in the males.

Antennæ varying in length; in the males about three fifths, but in the females not much more than half, of the length of the fore wings, slender; the joints scarcely distinct; and the club very slender.

THORAX robust, woolly.

Fore Wings large; those of the males elongate, subtriangular, those of the females triangularly subovate. Costal margin straight, or but little convex, except at the tip, which is more rounded in the males than in the

females; apical angle obtuse. Apical margin entire, slightly convex in the males, more strongly so in the females. Veins arranged as in *Emesis*.

Hind Wings subtriangularly ovate in the males, more rounded in the females. Outer margin entire. Veins arranged as in *Emesis*.

Legs similarly constructed to those of *Emesis*.

ABDOMEN elongate in both sexes, more oval in the female.

This genus is well exemplified by *Papilio Caricæ* *Linnaeus*, *P. Lamis* *Cramer*, and a considerable number of allied species, which are generally distinguished by the brown ground colour of the upper side of their wings, varied with shades of fulvous orange; and by the large white patch which occupies nearly the whole of the disc of the hind wings, and a considerable portion of the fore ones. On the under side the outer margin of the wings (especially the hinder pair) is marked with a row of dark round spots, varying in size, those towards the anal and outer angles being the most conspicuous. There is considerable variation in the length of the labial palpi (the great length of which in the typical species constitutes the chief characteristic of the genus) and in the form of the wings, which in the beautiful *N. Mantus* are of a considerably elongated oval form, whilst the hind wings in *N. Belise* and *Lycorias* (n. s.) have the anal angles produced into short tails. *N. Mantus* and *Belise* are remarkable also for their deviation from the ordinary colouring of the species, both the sexes of the former, and the males in the latter, having the upper surface of the wings ornamented with brilliant blue tints. *N. Phliasus* and *Odites* also recede from the typical style of colouring in the more variegated markings of their wings. These species indicate the propriety of adding to the genus *N. Soranus*, *Tytius*, and *Phylleus* of *Cramer*, as well as *P. Abaris* of the same author, the male of which appears to me to be identical with the insect to which Mr. E. Doubleday has applied the name of *Tyanitis Tenes*.

NYMPHIDIUM.

1. NYMPH. CARICÆ.

Papilio Caricæ *Linnaeus*, *Syst. Nat.* ii. p. 792. n. 244., *Mus. Utr.* 324.; *Clerck*, *Icon.* t. 20. f. 2.; *Merian*, *Surin. Ins.* t. 40.; *Cramer*, *Pap.* pl. 170. f. E.; *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 305. n. 155.; *Godart*, *Enc. M.* ix. p. 575. n. 53.; *Hübner*, *Verz. bek. Schm.* p. 20. n. 134. (*Peplia* C.); *Hübner*, *Samml. exot. Schm.* Band i. pl. —. (*Linnaus* C.); *E. Doubleday*, *List Lep. Brit. Mus.* pt. 2. p. 11. (*Nymphidium* C.).
South America. B. M.

2. NYMPH. LYSIMON.

Papilio Lysimon *Stoll*, *Suppl. Cram.* pl. 39. f. 1. I A.; *Godart*, *Enc. M.* ix. p. 575. n. 51. (*Erycina* Lys.); *E. Doubleday*, *List Lep. Brit. Mus.* pt. 2. p. 11. (*Nymphidium* Lys.).
Peplia Lisimæna *Hübner*, *Verz. bek. Schm.* p. 20. n. 136. Surinam, Para. B. M.

3. NYMPH. LAMIS.

Papilio Lamis *Fabricius*, *Mant. Ins.* ii. p. 78. n. 714., *Ent. Syst.* iii. pt. 1. p. 305. n. 157.; *Cramer*, *Pap.* pl. 335. f. F. G.; *Godart*, *Enc. M.* ix. p. 575. n. 52.; *Hübner*, *Samml. exot. Schm.* Bd. ii. pl. —., *Verz. bek. Schm.* p. 20. n. 133. (*Peplia* L.); *E. Doubleday*, *List Lep. Brit. Mus.* pt. 2. p. 20. (*Nymphidium* L.).
Guiana, Brazil, Honduras. B. M.

4. NYMPH. AZAN.

Nymphidium Azan *E. Doubleday*, *List Lep. Brit. Mus.* pt. 2. p. 10.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 73. f. 5.
Para. B. M.

5. NYMPH. CACHRYS.

Hesperia Cachrys *Fabricius*, *Mant. Ins.* ii. p. 78. n. 715., *Ent. Syst.* iii. pt. 1. p. 306. n. 158.; *Godart*, *Enc. M.* ix. p. 576. n. 55.
Papilio Damon *Stoll*, *Suppl. Cram.* pl. 39. f. 5. 5 D.; *E. Doubleday*, *List Lep. Brit. Mus.* pt. 2. p. 10. (*Nymphidium* D.).
Peplia Damæna *Hübner*, *Verz. bek. Schm.* p. 20. n. 138. Guiana, Brazil. B. M.

6. NYMPH. PELOS.

Papilio Pelops *Cramer*, *Pap.* pl. 170. f. F.; *Fabricius*,

Mant. Ins. ii. p. 78. n. 713., *Ent. Syst.* iii. pt. 1. p. 305. n. 156.; *Godart*, *Enc. M.* ix. p. 575. n. 54.

Peplia Pelope *Hübner*, *Verz. bek. Schm.* p. 20. n. 135. Guiana.

7. NYMPH. MENALCUS.

Papilio Menalcus *Cramer*, *Pap.* pl. 390. f. K.; *Godart*, *Enc. M.* ix. p. 576. n. 56. (*Erycina* M.).
Peplia Menalcis *Hübner*, *Verz. bek. Schm.* p. 20. n. 139. Surinam.

8. NYMPH. PLATEA.

Desmozona platea *Boisduval* MS.
Nymphidium platea *E. Doubleday*, *List Lep. Brit. Mus.* pt. 2. p. 11.; *Doubl. Westw. & Hewits. Gen. D. L.* pl. 73. f. 4.
Para, Pernambuco. B. M.

9. NYMPH. ACHEROIS.

Desmozona Acherolis *Boisduval*, *Sp. gén. Léop.* i. t. 21. f. 1.; *E. Doubleday*, *List Lep. Brit. Mus.* pt. 2. p. 11.
Cayenne, Pernambuco. B. M.

10. NYMPH. LEUCOSIA.

L. S. Leucosia *Hübner*, *Samml. exot. Schm.* Band i. pl. —.; *E. Doubleday*, *List Lep. Brit. Mus.* pt. 2. p. 11. (*Nymphidium* L.).
Para. B. M.

11. NYMPH. MOLPE.

Linnaus S. Molpe *Hübner*, *Samml. exot. Schm.* Band i. pl. —.; *E. Doubleday*, *List Lep. Brit. Mus.* pt. 2. p. 11. (*Nymphidium* M.); *Hübner*, *Verz. bek. Schm.* p. 20. n. 137. (*Peplia* M.).
Para. B. M.

12. NYMPH. MANTHUS.

Papilio Mantus *Fabricius*, *Mant. Ins.* ii. p. 78. n. 717., *Ent. Syst.* iii. pt. 1. p. 306. n. 161.; *Cramer*, pl. 47. f. F. G.; *Godart*, *Enc. M.* ix. p. 577. n. 65. (*Erycina* M.); *Boisduval*, *Sp. gén. Léop.* pl. 6. f. 11.; *E. Doub.* *List Lep. Brit. Mus.* pt. 2. p. 11. (*Nymphidium* M.).
Peplia Mante *Hübner*, *Verz. bek. Schm.* p. 20. n. 140. Guiana, Brazil, Venezuela. B. M.

13. NYMPH. BELISE.
Papilio Belise Cramer, Pap. pl. 376. f. E. F.; Godart, Enc. M. ix. p. 578. n. 67.
Thisbe Belise Hübner, Verz. bek. Schm. p. 24. n. 189.
 Guiana, Brazil.
14. NYMPH. ODITES.
Papilio Odites Cramer, Pap. pl. 11. f. E. F.; Godart, Enc. M. ix. p. 576. n. 58. (Erycina O.).
Synargis Odites Hübner, Verz. bek. Schm. p. 18. n. 117.
 Surinam.
15. NYMPH. PHLIASUS.
Papilio Phliasus Cramer, Pap. pl. 192. f. A. B.; Clerck, Icon. t. 41. f. 5.; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 10. (Nymphidium Ph.).
Adelpha Phliase Hübner, Verz. bek. Schm. p. 42. n. 376. (nec Heterochroa Phliassa, ante p. 278. n. 22.).
Erycina Phillone Godart, Enc. M. ix. p. 574. n. 50.
 Guiana, Brazil. B. M.
16. NYMPH. TYTIUS.
Papilio Tytius Fabricius, Spec. Ins. ii. p. 54. n. 240., Ent. Syst. iii. pt. 1. p. 48. n. 147. (female); Cramer, Pap. pl. 121. f. C. D.; Godart, Enc. M. ix. p. 426. and p. 576. n. 59. (Erycina T.).
Synargis Tytia Hübner, Verz. bek. Schm. p. 18. n. 116.
 Surinam.
17. NYMPH. SORANUS.
Papilio Soranus Cramer, Pap. pl. 353. f. A. B. (male?); Godart, Enc. M. ix. p. 426. and 577. n. 61.
Synargis Sorane Hübner, Verz. bek. Schm. p. 18. n. 115.
Papilio Orestes Cramer, Pap. pl. 282. f. A. B. (female?).
Synargis Orestessa Hübner, Verz. bek. Schm. p. 18. n. 114.
 Surinam.
18. NYMPH. PHYLLEUS.
Papilio Phylleus Cramer, Pap. pl. 63. f. D. E.
Erycina Phylacis Godart, Enc. M. ix. p. 426. and 577. n. 62.
Synargis Phyllea Hübner, Verz. bek. Schm. p. 18. n. 113.
 Surinam.
19. NYMPH. ABARIS.
Papilio Abaris Cramer, Pap. pl. 93. f. C. (female); Godart, Enc. M. ix. p. 584. n. 97. (Erycina A.).
Hamearis Abarissa Hübner, Verz. bek. Schm. p. 19. n. 126.
 (Male) *Tyanitis Tenes E. Doubl. List Lep. Brit. Mus. p. 19.*
 Guiana, Para, Amazon. B. M.
20. NYMPH. ZEURIPE.
Hypophylla Zeurippe Boisduval, Sp. gén. Léop. pl. 20. f. 5.; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 9.
 (Female?) *Hypophylla Eumedes E. Doubleday, op. cit. p. 9.*
 Honduras, Mexico. B. M.

Genus XXVII. ARICORIS.

ARICORIS *Boisduval MS.*HESPERIA p. *Hübner.*ERYCINA p. and NYMPHALIS p. *Godt.*

BODY robust; wings large, rounded, entire; labial palpi elongated, slender; antennæ almost filiform.

HEAD small, finely hairy, not tufted.

Eyes moderate-sized, naked.

Labial Palpi considerably elongated, slender, compressed, porrected, the second joint obliquely, the third joint horizontally, about level with the middle of the eyes, and extending in front as far as the length of the head; the second joint curved, scaly; the third joint slender, nearly naked, filiform, nearly half the length of the second joint in the males, but more than half its length in the females.

Antennæ slender, rather more than half the length of the fore wings in the male, shorter in the female; articulations scarcely distinct, not ringed with white; terminated by a long, gradually formed, but very slender club, being in the female but little thicker than the rest of the antennæ.

THORAX robust, finely hairy.

Fore Wings large, triangularly ovate. Costal margin moderately curved; apical angle obtuse. Apical margin entire, more or less convex (more convex in the females than in the males), fringe long. Inner margin nearly straight. Costal vein extending to about the middle of the costa. Postcostal with the first two branches arising before the anterior extremity of the discoidal cell; the third branch arising at about three fifths of the length of the wing; fourth branch wanting; terminal portion of the postcostal vein extending to the tip of the wing. Upper disco-cellular extremely minute, arising about as far beyond the second branch of the postcostal vein as the distance between the first and second branches; middle and lower disco-cellular veins nearly equal in length, transverse, very slender, the latter uniting with the third branch of the median vein, either close to its origin or a little beyond it, and closing the discoidal cell transversely.

Hind Wings large, subovate, entire. Costal margin curved. Costal vein extending to about two thirds of the length of the costa. Postcostal vein arising considerably nearer the body than the precostal; branching at a

moderate distance from the base. Upper disco-cellular arising just beyond the branch of the postcostal, transverse, very slender: lower disco-cellular of about equal length, also transverse, uniting with the third branch of the median vein exactly at its base.

Fore Legs of the male very minute, scaly, and moderately clothed with fine short hairs. *Tibia* rather longer than the femur. *Tarsus* obtuse, about one third of the length of the tibia. *Fore Legs* of the female at least four times as long as those of the male, and of the ordinary form, scaly. *Tarsus* one third longer than the tibia; basal joint nearly half the length of the tarsus. *Tibiæ* and tips of the tarsal joints armed beneath with sharp spines. *Ungues* acute, curved, as in the hind legs.

Four Hind Legs moderately long, slender, scaly, scarcely armed with spines beneath. *Femur* of the middle legs elongated. *Ungues* porrected, very much curved.

ABDOMEN elongated, moderately dilated in the females.

This genus is certainly very nearly allied both to *Nymphidium* and *Pandemos*, especially in the elongated palpi; to the large species which I have arranged at the end of the genus *Emesis* it is also closely related; but the large rounded wings of uniform appearance in both sexes, together with the want of the metallic tints of *Pandemos* and *Theope*, at once remove the species from all those groups. M. Boisduval in his MS. has united *E. Pais* with *Epitus*, but the latter insect, although somewhat similar in general form, colours, and markings, is certainly not congeneric, differing not only in its scalloped wings, but also in the arrangement of its wing veins and palpi. Judging from the figure of Cramer of his *Papilio Theanus*, and that of Jones (copied by Donovan amongst his Drawings in the Hopean Collection at Oxford) of *Papilio Constantius*, I am inclined to regard these two butterflies as allied to, if not congeneric with, the present genus. Their colours and markings are, however, very dissimilar.

ARICORIS.

- A. *Fore Wings* triangularly ovate. *Hind Wings* broadly ovate.
(*Aricoris* proper).
1. AR. EPITUS.
Papilio Epitus Cramer, Pap. pl. 270. f. C.
Nymphalis Epigea Godart, Enc. M. ix. p. 426. n. 243.
Erycina Epigea Godart, op. cit. p. 577. n. 63.
Hesperia Jaera Hübner, Verz. n. 194.
B. M.
 Surinam.
 2. AR. TISIPHONE.
Aricoris Tisiphone Westw. MS.; Doubl. Westw. & Hewits.
*Gen. D. Lep. pl. 72. f. 7. (male).**
 Brazil.
 3. AR. TUTANA.
Erycina Tutana Godart, Enc. M. ix. p. 577. n. 60.
An var. A. Tisiphone?
 Brazil.
 4. AR. ? CONSTANTIUS.
Papilio N. Constantius Jones, Icones, vi. t. 50. f. 1.;

Donovan's Drawings in *Bibl. Hope, Oxford*; *Fabricius, Ent. Syst. III. pt. 1. p. 152. n. 468.*

— ?

5. AR. THEANUS.
Papilio Theanus Cramer, Pap. pl. 139. f. F.
Asterope Theano Hübner, Verz. n. 642.
 Surinam.
- B. *Fore Wings* elongate. *Hind Wings* short, subtrigonal. (*Setabis*
E. Doubl., Arctes Boisd. MS.)
6. AR. (SETABIS) MYRTIS.
Setabis Myrtis E. Doubleday, List Lep. Brit. Mus. II. p.
19.†
 Para. B. M.
7. AR. (SETABIS) SERICA.
Aricoris (Setabis) serica Westw. nov. sp.‡; Doubl. Westw.
& Hewits. Gen. D. Lep. pl. 72. f. 8.
 Para. Mus. Bates.

* A. alis utrinque fuscis, dimidio basali obscuriori, strigis nonnullis brevibus obscuris inter basin et medium, lineaque communi obscura undulata ad basin partis pallidæ: posticis in maribus puncto parvo ad angulum analem duobusque similibus ad angulum externum nigris. Expans. alar. maris unc. $1\frac{9}{10}$, fœm. fere unc. $2\frac{1}{2}$.

† A. alis fusco-nigris: anticis macula magna elongata triangulari baseos (ad apicem oblique truncata), alteraque pone medium subovali obliqua flavis; posticis macula maxima elongato-triangulari extus integra, flava, alis subtus cupreo-fuscis maculis flavis majoribus; costa posticarum flava maculisque quatuor submarginalibus albis. Expans. alar. unc. $1\frac{1}{2}$.

‡ A. alis fusco-nigris: anticis macula magna e basi ad medium marginis interni, cæruleo-viridi sericea, fasciæque lata obliqua pone medium fulva; posticis macula maxima aræ dimidium internum occupante cæruleo-viridi: alis infra cupreo-fuscis, basi costæ anticarum fasciæque pone medium albis; posticis fasciæ indistincta abbreviata ad angulum analem alba. Expans. alar. unc. 2.

Genus XXVIII. BÆOTIS.

BÆOTIS *Hübner*.ERYCINA p. *Godt*.

BUTTERFLIES of small size : wings generally variegated with fasciæ, or large patches of light colours on a dark ground. HEAD small, finely hairy, with a slight tuft on the crown.

Eyes naked.

Antennæ about half the length of the fore wings, slender; joints tolerably distinct; terminated by a moderately robust club, gradually formed, incurved at the tip.

Labial Palpi small, compressed, furnished beneath with scaly hairs, ascending obliquely, the tip not visible from above, beyond the hairs of the face, and not reaching above one fourth of the height of the eyes; terminal joint minute, conical.

THORAX small, shortly ovate.

Fore Wings more or less broadly triangular. Costal margin more or less arched; apical angle obtuse. Apical margin more or less convex. Costal vein short, not, or scarcely, reaching to the middle of the wing. Postcostal vein emitting two branches before the anterior extremity of the discoidal cell; third branch arising at about two thirds of the length of the wing; fourth branch, when present, arising very near the tip of the wing. Upper disco-cellular vein obsolete: middle disco-cellular arising at about the same distance beyond the second postcostal branch as exists between the first and second branches, slightly curved, transverse: lower disco-cellular rather longer than the middle one, its lower extremity extending more towards the tip of the wing, uniting with the third branch of the median vein at a short distance beyond its origin. Upper discoidal vein arising simultaneously with the middle disco-cellular.

Hind Wings subtriangularly rounded, entire along the apical margin, rather angulated at the anal angle. Postcostal vein arising much nearer the body than the precostal, branching at a moderate distance from the base. Upper disco-cellular short, slender, arising at or close beyond the origin of the postcostal branch: lower disco-cellular very slender (almost obsolete), longer than the upper, uniting with the third branch of the median vein at or but a very short distance beyond its origin.

Fore Legs of the male very minute, slender, moderately clothed with fine hairs. Tibia and tarsus of nearly equal length, the latter simple. Fore Legs of the female not one third longer than those of the male. Tarsus slightly longer than the tibia, rather dilated; the tips of the joints beneath scarcely armed with spines.

Four Hind Legs long, slender. Tibiæ of the hind legs rather dilated, almost destitute of spines beneath. Tarsi with the joints unarmed with spines at the tips.

ABDOMEN moderately elongate and slender in both sexes.

This is rather an extensive genus of small but prettily marked and coloured species, agreeing with several of the foregoing genera in the general arrangement of the veins of the wings in many of the species, but having the postcostal vein furnished with four branches in others; there is, however, so much resemblance between the two groups in other respects, that I do not feel inclined on that account to separate them into distinct genera. I have also added to the genus several prettily marked species, distinguished by having a fine silver line running quite close to the outer border of all the wings on the upper side; this is a peculiarity which especially characterises the species of the genus *Charis*, and it is indeed by these butterflies that the two groups are brought into contact. As these silver-lined species, however, differ entirely in their other markings from the species of *Charis*, I have preferred arranging them in this position, especially as the female of one of them, *B. Trochilia*, bears so strong a resemblance to *B. Parthenis* and *Cydias* that the three might almost be mistaken at the first sight for varieties of one species.

BÆOTIS.

Section I. Postcostal Vein of Fore Wings with four branches.

1. BÆOT. NICIAS.

Papilio Nicias Stoll, *Suppl. Cram. Pap.* pl. 13. f. 3.; *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 12. (*Bæotis* N.).

Erycina Nicon Godart, *Enc. M.* ix. p. 588. n. 119. (*Erycina* N.).

Hyphilaria Nicia Hübner, *Ferz. bek. Schm.* p. 26. n. 203. B. M.
Surinam, Para.

2. BÆOT. PARTHENIS.

Bæotis Parthenis E. Doubl. *Cat. Lep. Brit. Mus.* pt. 2. p. 12.; *Doubl. Westw. & Hewitts. Gen. D. L.* pl. 71. Brazil. B. M.

3. BÆOT. CYDIAS.*

Bæotis Cydias E. Doubl. in *Cat. Lep. Brit. Mus.* pt. 2. p. 12. Para. B. M.

* *B. alis latis nigricantibus; anticis strigis quinque transversis æqualibus strigaeque subapicali maculari; posticis strigis sex, albidis; subtus similiter colorata, striga submarginali in omnibus alis e maculis conoideis confecta. Expans. alar. antic. unc. 1 $\frac{1}{5}$*

Section II. *Postcostal Vein of Fore Wings with three branches.*

4. BÆOT. MELANIS.

Bæotis Melanis Hübner, *Zutr. exot. Schm.* f. 427, 428.
Brazil.

5. BÆOT. CINGULUS.

Papilio Cingulus Stoll, *Suppl. Cram. Pap.* pl. 13. f. 4.;
Godart, *Enc. M.* ix. p. 588. n. 117. (Erycina C.);
E. Doubleday, *List Lep. B. M.* pt. 2. p. 12. (Bæotis C.).
Hesperia Cingula Hübner, *Verz. bek. Schm.* p. 25. n. 196.
Surinam, Para. B. M.

6. BÆOT. ÆROPE.

Bæotis Ærope E. Doubl. *List Lep. B. Mus.* pt. 2. p. 12.;
Doubl. Westw. & Hewits. *Gen. D. Lep.* pl. 71. f. 2.
Para. B. M.

7. BÆOT. HISBON.

Papilio Hisbon Fabricius, *Mant. Ins.* ii. p. 83. n. 748.,
Ent. Syst. iii. pt. 1. p. 318. n. 206.; Cramer, *Pap.*
pl. 83. f. C.
Bæotis Hisbæna Hübner, *Verz. bek. Schm.* p. 21. n. 156.;

Godart, *Enc. Méth.* ix. p. 574. n. 48. (Erycina H.);
E. Doubl. *List Lep. Brit. Mus.* pt. 2. p. 12. (Bæotis H.).

Brazil.

B. M.

8. BÆOT. REGULUS.

Hesperia Regulus Fabricius, *Ent. Syst.* iii. pt. 1. p. 318.
n. 205.; Jones, *Icon.* vi. t. 86. f. 4.; Godart, *Enc. M.*
ix. p. 589. n. 120. (Erycina R.); Donovan, *Ins. of*
India, pl. 43. f. 3.

Brazil.

9. BÆOT. TALUS.

Papilio Talus Fabricius, *Mant. Ins.* ii. p. 83. n. 745.,
Ent. Syst. iii. pt. 1. p. 318. n. 202.; Godart, *Enc. M.*
ix. p. 588. n. 118. (Erycina T.).
Papilio pygmæa Cramer, *Pap.* pl. 7. f. C. D.
Hesperia Tale Hübner, *Verz. bek. Schm.* p. 25. n. 195.
Surinam.

10. BÆOT. TROCHILIA.

Bæotis Trochilia Westw. nov. sp.*
Para.

Mus. Saunders.

Genus XXIX. CHARIS.

Nymphidium Boisduval, Blanchard (but not of Fabricius).
Charis Hübner, E. Doubleday.

BUTTERFLIES of small size, generally of dark colours, variegated with darker spots, arranged in irregular strigæ, and with one or two slender submarginal lines of silver, or silvery blue.

Eyes generally finely hirsute.

Antennæ slender; joints distinct, finely ringed with white; terminated by a moderate-sized club, incurved at the tip.

Labial Palpi minute, porrected obliquely, but scarcely ascending above the height of one third of the eye, clothed beneath with fine hairs; terminal joint small, nearly naked, scarcely visible from above beyond the hairs of the face.

THORAX small, finely hairy.

Fore Wings subtriangularly elongate in the males; wider, with the costa and apical margin more rounded in the females. Apical margin entire. Veins arranged as in Bæotis, but with the disco-cellular veins still more slender.

Hind Wings subovate triangular, rounded along the outer margin. Anal angle rather obtuse. Veins arranged as in Bæotis. The disco-cellular veins extremely slender.

Fore Legs of the males small, extremely hairy. Fore Legs of the female about one third longer than those of the male, slender, scaly. Tibia shorter than the femur. Tarsus as long as, or longer than, the tibia, with the middle joints rather dilated, and armed beneath at the tips with fine spines.

Four Hind Legs long, slender. Femora hairy beneath, those of the middle feet more elongated; intermediate tibiæ attenuated to the end; hind ones rather dilated in the middle. Tarsi armed beneath with fine spines.

ABDOMEN rather short; slender in the males, more ovate in the females.

This is a group of small and generally dark-coloured butterflies, having the wings variegated with still darker irregular markings, forming interrupted fasciæ, but especially distinguished by the wings being ornamented along the apical margin with two slender silver or steel coloured glossy lines. The majority of the species are further distinguished by the hirsute eyes, a character wanting,

* B. alis supra maris lætissime cæruleis, anticis purpureo tinctis; fœminæ luteo-albidis; omnibus in utroque sexu fasciis transversis æqualibus (in mare e costa ad medium alarum posticarum tantum extensis), costa anticarum maris, margineque apicali latiori irregulari (lineam argenteam angustam submarginalem communem gerente) nigris; alis infra utriusque sexus luteo-albidis nigro fasciatis linea submarginali argentea subinterrupta. Expans. alar. antic. circ. unc. 1.

however, in *Ch. Cæneus* and two or three allied species. The last-named species is remarkable for being the only butterfly of the family found in the United States. *Ch. Azora*, and one or two allied undescribed species, differ from the rest in their elongated fore wings in both sexes, marked near the tips with short silvery longitudinal streaks.

CHARIS.

1. *Ch. ACANTHUS*.

Papilio Acanthus Fabricius, Mant. Ins. ii. p. 77. n. 702., Ent. Syst. iii. pt. 1. p. 302. n. 143.; Cramer, Pap. pl. 380. f. K. L.; Godart, Enc. M. ix. p. 585. n. 103. (Erycina A.).

Charis Gyadis var. Hübner, Verz. bek. Schm. p. 21. n. 154.

2. *Ch. GYAS*.

Papilio Gyas Fabricius, Mant. Ins. ii. p. 83. n. 758., Ent. Syst. iii. pt. 1. p. 324. n. 230.; Cramer, Pap. pl. 28. f. F. G.; Godart, Enc. M. ix. p. 586. n. 104. (Erycina G.).

Charis Gyadis Hübner, Verz. bek. Schm. p. 21. n. 154. Surinam.

3. *Ch. CLEONUS*.

Papilio Cleonus Cramer, Pap. pl. 380. f. H. 1.; Godart, Enc. M. ix. p. 573. n. 42. (Erycina Cl.).

Charis Timæa E. Doubl. List Lep. Brit. Mus. pt. 2. p. 17.

Guiana, Brazil.

B. M.

4. *Ch. CLEODORA*.

Erycina Cleodora Godart, Enc. M. ix. p. 573. n. 43.; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 17. (Charis Cl.).

Brazil.

B. M.

5. *Ch. HIRIA*.

Erycina Hiria Godart, Enc. M. ix. p. 584. n. 95.

Brazil.

6. *Ch. ARIUS*.

Papilio Arius Cramer, Pap. pl. 31. f. E.; Godart, Enc. M. ix. p. 589. n. 122. (Erycina A.).

Echenais Aria Hübner, Verz. bek. Schm. p. 19. n. 118.

Surinam.

7. *Ch. AVIUS*.

Papilio Avius Fabricius, Mant. Ins. ii. p. 77. n. 701., Ent. Syst. iii. pt. 1. p. 301. n. 142.; Cramer, Pap. pl. 92. f. B.; Godart, Enc. M. ix. p. 573. n. 41.

Charis Ania Hübner, Verz. bek. Schm. p. 21. n. 155.; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 16. (Charis Anius).

Brazil, West Indies.

B. M.

8. *Ch. AZORA*.

Erycina Azora Godart, Enc. M. ix. p. 572. n. 39.; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 16. (Charis Az.).

Brazil.

9. *Ch. GYNCEA*.

Erycina Gyncea Godart, Enc. M. ix. p. 573. n. 40.

Brazil.

10. *Ch. JESSA*.

Nymphidium Jessa Boisduval, Sp. gén. Léop. pl. 6. f. 10.

Brazil.

11. *Ch. PERONE*.

Charis Perone E. Doubl. List Lep. Brit. Mus. pt. 2. p. 16.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 71. f. 9.

Brazil, Para.

B. M.

12. *Ch. CÆNEUS*.

Papilio Cæneus Linnæus, Syst. Nat. ii. p. 796. n. 273.

Charis Cereus E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 16.

Erycina virginensis Boisduval in Guérin, Iconogr. R. Anim. Ins. t. 81. f. 1.

Nymphidia pumila Boisduval & Leconte, Icon. Lep. Am. Sept. t. 37. f. 6, 7.

Georgia.

B. M.

Genus XXX. MESOSEMIA.

MESOSEMIA *Hübner, E. Doubleday.*

DIOPHTHALMA *Boisduval, Blanchard.*

ERYCINA *p. Godt.*

BODY slender: wings moderate-sized or large; fore ones subtriangular, marked near the middle with a circular black spot bearing several minute white points.

HEAD small, finely hairy, with a small tuft on the crown.

Eyes large, lateral, finely hairy.

Antennæ slender, half the length of the fore wings; joints moderately distinct, finely ringed with white; terminated by a short, moderately robust, gradually formed club, compressed within, and with the tip incurved.

Labial Palpi very small, compressed, porrected almost horizontally, but not extending beyond the hairs of the face, clothed beneath with moderately long hairs; the apical joint minute and conical.

THORAX moderately robust, finely hairy.

Fore Wings subtriangular, entire. Costal margin but slightly arched, except towards the extremity; apical angle rather obtuse. Apical margin moderately convex; hinder angle rounded. Inner margin generally straight, or dilated and convex. Postcostal vein with four branches in the majority of the species; the first and second branches arising before the anterior extremity of the discoidal cell; the third at a considerable distance beyond the cell of the fourth, almost at the apex of the wing; the terminal portion of the postcostal vein extending below the tip of the wing. Upper disco-cellular vein generally obsolete; middle one arising at a short distance beyond the second branch of the postcostal, arched, transverse: lower disco-cellular rather longer, slender, the tip directed more towards the apical margin of the wing, uniting with the third branch of the median vein at a short distance beyond its origin. Upper discoidal vein arising simultaneously with the middle disco-cellular.

Hind Wings subovate, entire along the outer margin; anal angle rounded. Costal vein very short, scarcely reaching beyond one fourth or one third of the length of the costa. Postcostal vein arising nearer the body than the precostal, curved at its base, so that its longitudinal portion extends from opposite the precostal vein. Precostal straight, porrected obliquely into the angulated base of the wing. Postcostal branching at a moderate distance from the base. Upper disco-cellular vein arising at a distance about equal to one third of the space between the branch of the postcostal and the base of the wing: lower disco-cellular longer but more slender and oblique, uniting with the third branch of the median vein at a moderate distance from its base.

Fore Legs of the male minute, thickly clothed with long silky hairs. *Fore Legs* of the female about three times the length of those of the males, scaly. Tarsus equal in length to the tibia, rather dilated in the middle; intermediate joints with one or more strong spines at the extremity beneath. Ungues and appendages very minute.

Four Hind Legs rather short, scaly. Tibiæ rather dilated in the middle, almost destitute beneath, as well as the tarsi, of minute spines. Ungues and appendages minute.

ABDOMEN elongate and slender in both sexes.

In addition to the well marked distinctions which the numerous insects of this genus possess in the central black spot (bearing several minute white points) in the middle of the fore wings, they are separated from most of the adjacent genera by their finely hairy eyes and the four-branching postcostal vein of the fore wings. The wings, and more especially the posterior pair, are more or less fasciated with dark streaks running across them, and the females are generally much duller in their colours than the opposite sex. The characters given above are those of the greater number of the species, but there are several other insects which agree with the rest in their general appearance and markings, but which exhibit several interesting peculiarities in their details. Thus *Mes. Cræsus* (*Capaneus* Cr.) has the fore wings in the males dilated along the inner margin, whilst the costal margin of the hind wings is dilated semicircularly at its base, and not only the costal but both branches of the postcostal and the discoidal run into the costal margin; moreover, in these same individuals the fore legs are so exceedingly minute as to be scarcely perceptible, with the tibia short and almost oval, and the tarsus short and conical. *Mes. Idotea*, *Lasus*, and *tenera* have only three branches to the postcostal vein, the upper disco-cellular vein being present in consequence of the discoidal cell being extended further longitudinally, especially in the last-named species. The males of these species are also remarkable on account of the extreme minuteness of the fore legs. *M. Idotea* in its markings bears a strong resemblance to many of the other species; but *M. Lasus* and *tenera* have the discoidal spot considerably beyond the middle of the wings, which are marked with several delicate waved pale lines.

MESOSEMIA.

Section I. *Fore Wings with four branches to the Postcostal Vein.*

* *Fore Legs of the male of small size. Hind Wings not dilated along the costa.*

1. *MES. FORMOSA.*

Mesosemia formosa Hewits. MS. †; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 71. f. 5. (nec 6.).
Amazon. Col. Hewitson.

2. *MES. SIFIA.*

Diophthalma Sifia Boisduval, *Sp. gén. Léop.* pl. 6. f. 9.
Brazil.

3. *MES. GNERIS.*

Diophthalma Gneris Boisduval MS.
Mesosemia Gneris E. *Doubl. List Lep. Brit. Mus.* pt. 2.

p. 13.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 71. f. 6. (nec 5.).

Cayenne.

B. M.

4. *MES. ULRICUS.*

Papilio Ulricus Fabricius, *Mant. Ins.* ii. p. 82. n. 735. (male), *Ent. Syst.* iii. pt. 1. p. 314. n. 187.; *Cramer, Pap.* pl. 100. f. E. F.; *Godart, Enc. M.* ix. p. 583. n. 91. (*Erycina* Ul.).
Papilio Ulricella Herbst, *Pap.* pl. 231. f. 6, 7.
Mesosemia Ultio Hübner, *Verz. bek. Schm.* p. 21. n. 147.
Surinam.

5. *MES. TITEA.*

Papilio Titea Stoll, *Suppl. Cram.* pl. 5. f. 6. and 6 G.
Erycina Tisis Godart, *Enc. M.* ix. p. 583. n. 90.
Surinam.

† "Upper side. Anterior wing light brown; the base, except the costal margin, light blue. In the cell is a black eye with pupil of white, and between it and the outer margin five belts of black, the first of which passes round the eye; the fourth is much broader than the rest. Posterior wing light blue, with two short lines of black upon the upper margin, succeeded by a straight belt and two marginal belts of black.—Under side light brown. Anterior wing as above, without the blue. Posterior wing with the base and nine belts of dirty white. Exp. 1 inch."—*Hewitson MS.*

6. MES. PHILOCLES.

Papilio Philocles Linnaeus, *Syst. Nat.* ii. p. 791. n. 240., *Mus. Utr.* p. 321.; *Clerck, Icon.* t. 45. f. 5, 6.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 215. n. 674.; *Cramer, Pap.* pl. 184. f. D. E. F.; *Godart, Enc. M.* ix. p. 581. n. 80. (*Erycina* Ph.); *Hübner, Verz. bek. Schm.* 21. n. 145. (*Mesosemia* Ph.); *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 13. (*Mesosemia* Ph.).
(Female) *Mesosemia Coea* Hübner, *Verz. bek. Schm.* p. 21. n. 146.

Guiana.

B. M.

7. MES. TELEGONE.

Diophthalma Telegone Boisduval, *Sp. gén. Lép.* pl. 21. f. 2.

Colombia.

8. MES. ICARUS.

Papilio Icarus Fabricius, *Mant. Ins.* ii. p. 77. n. 705., *Ent. Syst.* iii. pt. 1. p. 302. n. 146.; *Godart, Enc. M.* ix. p. 578. n. 69. (*Erycina* Icarus); *Hübner, Verz. bek. Schm.* 21. n. 143. (*Mesosemia* Ic.); *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 12. (*Mes.* Ic.).

Papilio Philemon Cramer, *Pap.* pl. 22. f. G. H.

Guiana and Brazil.

B. M.

9. MES. VANESSA.

Papilio Vanessa Fabricius, *Ent. Syst.* iii. pt. 1. p. 192. n. 597.; *Jones, Icon.* vi. t. 35. f. 4.; *Donovan, Nat. Repos.* v. pl. 166.

America.

10. MES. EPHYNES.

Papilio Ephyne Fabricius, *Spec. Ins.* ii. p. 68. n. 308., *Ent. Syst.* iii. pt. 1. p. 224. n. 703.; *Cramer, Pap.* pl. 39. f. E. F.; *Godart, Enc. M.* ix. p. 581. n. 82. (*Erycina* E.).

Mesosemia Ephyne Hübner, *Verz. bek. Schm.* p. 21. n. 151.

Surinam.

11. MES. EUMENUS.

Papilio Eumenus Fabricius, *Spec. Ins.* ii. p. 68. n. 307., *Ent. Syst.* iii. pt. 1. p. 224. n. 702. (male); *Cramer, Pap.* pl. 92. f. F. G.; *Godart, Enc. M.* ix. p. 582. n. 83. (*Erycina* E.).

Mesosemia Eumene Hübner, *Verz. bek. Schm.* p. 21. n. 149.

West India.

12. MES. RENATUS.

Papilio Renatus Fabricius, *Mant. Ins.* ii. p. 31. n. 330., *Ent. Syst.* iii. pt. 1. p. 216. n. 675.; *Godart, Enc. M.* ix. p. 582. n. 84. (*Erycina* R.).

Papilio Rosina Cramer, *Pap.* pl. 326. f. B.

Mesosemia Rosina Hübner, *Verz. bek. Schm.* p. 21. n. 153.

Surinam.

13. MES. OSINIA.

Papilio Osinia Cramer, *Pap.* pl. 115. f. F.; *Godart, Enc. M.* ix. p. 582. n. 85. (*Erycina* O.).

Mesosemia Osinia Hübner, *Verz. bek. Schm.* p. 21. n. 148.

Var. ? *Papilio Thymetus* Cramer, *Pap.* pl. 184. f. G.

Mesosemia Thymete Hübner, *Verz. bek. Schm.* p. 21. n. 152.

Surinam.

14. MES. HYPHEUS.

Papilio Hypheus Fabricius, *Spec. Ins.* ii. p. 67. n. 305., *Ent. Syst.* iii. pt. 1. p. 223. n. 698.; *Cramer, Pap.* pl. 92. f. C.; *Godart, Enc. M.* ix. p. 582. n. 86. (*Erycina* H.).

Mesosemia Hiphia Hübner, *Verz. bek. Schm.* p. 21. n. 144.

West India.

15. MES. ODICE.

Erycina Odice Godart, *Enc. M.* ix. p. 583. n. 88.

Brazil.

16. MES. RHODIA.

Erycina Rhodia Godart, *Enc. M.* ix. p. 583. n. 89

Brazil.

17. MES. TULLIUS.

Papilio Tullius Fabricius, *Mant. Ins.* ii. p. 34. n. 359., *Ent. Syst.* iii. pt. 1. p. 224. n. 704.; *Godart, Enc. M.* ix. p. 582. n. 87. (*Erycina* T.).

Cayenne.

** *Fore Legs of the male extremely minute. Hind Wings dilated along the costa.* (*Semomesia* Westwood.)

18. MES. (SEMOMESIA) CROESUS.

Papilio Croesus Fab. *Gen. Ins. Mant.* 259., *Ent. Syst.* iii. pt. 1. p. 216. n. 676.; *Godart, Enc. M.* ix. p. 581. n. 81. (*Erycina* Cr.).

Papilio Capaneus Cramer, *Pap.* pl. 236. f. D.; *Hübner, Verz. bek. Schm.* 21. n. 150. (*Mesosemia* Cap.); *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 14. (*Mes.* C.).

Surinam.

B. M.

19. MES. (SEMOMESIA) GEMINUS.

Papilio Geminus Fabricius, *Ent. Syst.* iii. pt. 1. p. 322. n. 220.; *Jones, Icon.* vi. t. 35. f. 2.; *Donovan's Drawings in Bibl. Hope, Oxford*; *Godart, Enc. M.* ix. p. 574. n. 46.

Mesosemia Mnesinoe Boisduval MS.

America.

Section II. *Fore Wings with only three branches to the Postcostal Vein.*
(*Fore Legs of the males extremely minute.*)

* *Wings with numerous pale, equidistant, transverse fasciae. Discoidal cell of Fore Wings reaching only to the middle.* (*Mesophthalma* Westw.)

20. MES. (MESOPHTHALMA) IDOTEA.

Mes. (Mesophthalma) Idotea Westw. nov. sp.†
Para. Mus. Saunders.

** *Wings with several submarginal, slender, waved, pale lines. Discoidal cell of Fore Wings much elongated.* (*Perophthalma* Westw.)

21. MES. (PEROPHTHALMA) TENERA.‡

Diophthalma tenera Boisduval MS.; *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 13. (*Mesos.* ten.).

Var. *Mesos. Lasus* E. Doubl. loc. cit.

Venezuela, Honduras, Para.

B. M.

† *M. alis latis, anticis costa et margine apicali convexis; fusco-nigris, strigis octo communibus pallide purpureo-griseis; anticis macula media rotunda nigra, albo 3-punctata; subtus similis sed paullo pallidior.* *Expans. alar. unc.* $1\frac{1}{8}$.

‡ *M. alis pallide fuscis, anticis fascia pallidiori media, ocello postico nigro, albo bipunctato, fulvoque circumdato, strigis tribus undatis pallidis gracilibus posticis; alis posticis pallide fuscis, pone medium luteo tinctis, strigisque undatis marginalibus.* *Expans. alar. unc.* $\frac{5}{8}$ — $\frac{9}{16}$. Var. *coloribus magis distinctis fasciaeque anticarum alba.*

Genus XXXI. CREMNA.

CREMNA *E. Doubleday, List Lep. B. M.*
 HAMANUMIDA *p. Hübner.*

BODY small, moderately slender; wings large, dark-coloured, marked with numerous pale spots or strigæ.
 HEAD small, with a strong tuft on the crown, and also on the face.

Eyes naked.

Antennæ about half the length of the fore wings; joints distinct, ringed with white; club rather short, gradually formed, moderately robust, incurved at the tip.

Labial Palpi porrected obliquely, slender, rather elongated, the tip about level with half the height of the eye, and extending rather beyond the hairs of the face; second joint long, scaly, scarcely hairy beneath; terminal joint very short, slender, more ovate in the female.

THORAX moderately robust, spotted with white.

Fore Wings large, nearly obovate. Costal margin much arched; apical angle more or less obtuse. Apical margin more or less dilated, alike in both sexes. Postcostal vein with four branches; the first and second arising before the anterior extremity of the discoidal cell; third branch about one third of the length between the cell and the tip of the wing; fourth branch near the tip. Upper disco-cellular vein very short, very oblique: middle and lower ones much curved, the extremity of the latter directed toward the apical margin, and uniting with the third branch of the median vein at a moderate distance beyond its origin.

Hind Wings broad, entire. Costal vein reaching to about half the length of the costa. Postcostal branching at a considerable distance beyond its base. Upper disco-cellular vein arising almost simultaneously with the branch; very oblique: lower one much longer than the upper and arched, uniting with the third branch of the median vein at a moderate distance from its base.

Fore Legs of the male very short, thick, and moderately hairy. *Fore Legs* of the female about three times the length of those of the male, thick, scaly. Tarsus armed beneath with strong spines at the tips of the intermediate joints.

Four Hind Legs short, thick, and scaly. Femora curved. Tibiæ destitute of spines beneath. Tarsi thick. Ungues and appendages minute.

The dark-coloured wings of the species of this genus covered with numerous pale spots or streaks, joined to their slightly waved hind margin, give them a certain resemblance to the species of *Calydna*; from which, however, they are at once distinct in their four-branched postcostal vein of the fore wings, and in the curved base of the postcostal vein of the hind wings. The characters detailed above are drawn from *C. Ceneus*, the males of which have the spottings of a pale blue, whilst they are pure white in the female. The apical margin of the fore wings in both sexes of this species is singularly dilated, the apical angle itself being slightly produced. In *C. Actoris* and *Thasus* the wings are of the ordinary form; the spots of the former being replaced in the latter by transverse slender fasciæ.

CREMNA.

1. CR. CENEUS.

Papilio Ceneus Fabricius, Mant. Ins. ii. p. 77. n. 703., Ent. Syst. iii. pt. 1. p. 302. n. 144.; Cramer, Pap. pl. 156. f. F.; Godart, Enc. M. ix. p. 580. n. 74. (Erycina C.).

Hamanumida Lusca Hübner, Verz. bek. Schm. p. 18. n. 108., Samml. exot. Schm. Bd. iii. pl. —.

Guiana, Brazil.

pl. —; *E. Doubl. List Lep. Brit. Mus. pt. 2. p. 14. (Cremna A.).*

Surinam, Para, Bahia.

B. M.

3. CR. THASUS.

Papilio Thasus Cramer, Pap. pl. 333. f. 1.; Godart, Enc. M. ix. p. 579. n. 70. (Erycina Th.).

Hamanumida Thase Hübner, Verz. bek. Schm. p. 18. n. 107.

Surinam.

2. CR. ACTORIS.

Papilio Actoris Fabricius, Mant. Ins. ii. p. 82. n. 742., Ent. Syst. iii. pt. 1. p. 316. n. 196.; Cramer, Pap. pl. 93. f. D.; Godart, Enc. M. ix. p. 579. n. 71.

Hamanumida Actoris Hübner, Verz. bek. Schm. p. 18. n. 106.

Napæa freq. *Actoris Hübner, Samml. exot. Schm. Band i.*

4. CR. ORPHEUS.

N. G. Orpheus Boisduval MS.

Cremna Orpheus E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 14.; Doubl. Westw. & Hewits, Gen. D. Lep. pl. 71. f. 8.

Brazil.

B. M.

Genus XXXII. LEMONIAS.

LEMONIAS, CALOSPILA, ANATOLE, and THAROPS *E. Doubleday*.
 NYMPHIDIUM *p. Boisduval MS.*

BODY variable in size, robust in some species, as in the typical Nymphalidæ, in others slender; wings considerably varied in their colours and markings.

HEAD moderate-sized, hairy.

Eyes generally naked.

Labial Palpi generally rather elongated, the tip elevated to about the middle of the eyes, and porrected beyond the hairs of the face, slender, and filiform; basal portion compressed, scaly, and but slightly hairy beneath.

Antennæ rather long, slender; annulations scarcely distinct; terminated by a long, gradually formed, rather slender club, straight or but slightly incurved at the tip.

THORAX more or less robust.

Fore Wings generally more or less triangular. Costal margin nearly straight, or but slightly curved; apical angle subacute. Apical margin generally slightly convex and entire. Postcostal vein with only three branches; the first and second arising before the anterior extremity of the discoidal cell; the third at some distance beyond it; the terminal part of the postcostal vein running to the tip of the wing, rather close to the costa. Upper disco-cellular obsolete: middle one arising simultaneously with the upper discoidal vein, forming with the lower disco-cellular nearly a straight line, and uniting with the median vein close to the origin of its third branch.

Hind Wings generally subovate; in some species rather elongated at the anal angle. The postcostal vein curved at its base, so that it appears to arise nearly opposite to the precostal; forked at a moderate distance from its base. Upper and lower disco-cellular veins slender, forming nearly a straight line from the origin of the branch of the postcostal to the origin of the third branch of the median.

Fore Legs of the male very small, and densely clothed with soft silky hairs. Fore Legs of the female considerably longer, slender, scaly. Tarsus armed beneath with some short spines at the tips of the joints; the terminal joints rather attenuated.

Four Hind Legs moderately long and slender, scaly. The tibiæ not armed beneath with spines. The tarsi armed as in the fore legs of the female. Ungues and appendages minute.

I have found it quite impossible to discover any sufficient characters to distinguish the four genera, Tharops, Anatole, Calospila, and Lemonias, proposed by Mr. E. Doubleday; neither, although there is considerable variation in the general appearance of the insects of which they were composed, do they exhibit any striking distinguishing feature in their colours or markings to lead to such a separation; many of them indeed agree in having the fore wings marked with numerous distinct or confluent dark patches on a pale ground (or *vice versâ*), and in having the disk of the hind wings more or less destitute of spots. There is also considerable difference in the size of the body amongst them; since in some it is as large in proportion as in the typical Nymphalidæ, thus indicating (in conjunction with the shorter, more robust wings and longer antennæ) increased powers of flight; whilst in others the body is slender, and the wings larger or longer.

There are some interesting differences in the colours of the sexes of these butterflies, although only a few species have been received with certain indications of their sexual identification. The males of a fine undescribed species (Anatole Pactyas *E. Doubleday*) have the fore wings suffused with orange, with a dusky border to the hind wings; whereas the female has the spots of the fore wings white, and the hind ones almost entirely of that colour. Lemonias Zygia has a large portion of the hind wings near the anal angle white, with a black spot near the angle; whilst the female has the spots of the fore wings larger, and the margin of the hind wings with a broad edge of brown spotted with white, black, and orange. L. Erostratus *Boisduval MS.*, a dark orange-coloured species allied to L. Crispus, exhibits very little difference in the two sexes, except that the female has the dark markings larger and more clearly defined, especially in the hind wings. The butterfly figured in our Plate LXXI. f. 12, as the Aristus of Stoll (but which appears to be distinct from that species, and to be the C. leucocyana of Hübner's *Zutrage*) is a male insect, the female being smaller, with shorter wings of a dull uniform pale brown, with small dark marks disposed as in the male. I believe this sex is identical with Echenais leucophæa of Hübner. The butterfly figured by Cramer (*Pap.* plate 118. fig. F.) has been regarded as the other sex of his figures D. and E. of the same plate, but these insects are males of closely allied species. The L. Nepia figured in our Plate LXXIII. f. 2. is, I believe, the female of one of them. I think it also probable that the insect figured by Hübner (*Samml.* vol. i.) as the female of L. Lucianus is the male of a distinct species, although the shorter and more rounded form of the wings may indicate the contrary. It has been suggested by Dr. Boisduval and E. Doubleday, that the beautiful L. Thermodoe of Hübner is the male of P. Zeanger of Stoll, which is most probably a female. I have also before me males of another species agreeing with Stoll's figure in colour, but with the markings of the fore wings less decided, and wanting the bluish lines near the tip of the wing.

I have added P. Meris of Cramer to this genus, as I can find no better situation for it; it agrees indeed with L. Menander and its allies in the metallic ground colouring of its wings; but its eyes are hirsute, and the hind wings pointed at the anal angle.

LEMONIAS.

A. Body robust. Wings, especially in the males, small and strong.

* Wings varied with metallic blue or green colours. (Tharops.)

† Eyes naked.

1. LEM. MENANDER.

Papilio Menander Cramer, Pap. pl. 334. f. C. D. (female); Hübner, Verz. bek. Schm. p. 109. n. 1179. (Tharops M.); Doubl. Westw. & Hewits. Gen. D. Lep. pl. 71. f. 11; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 14. (Tharops M.).

Erycina Petronius Godart, Enc. M. ix. p. 570. n. 29. (female).

Guiana, Brazil.

B. M.

2. LEM. PETRONIUS.

Hesperia Petronius Fabricius, Ent. Syst. iii. pt. 1. p. 324. n. 227.; Jones, Icon. vi. pl. 37. f. 4.; Donovan, Ins. Ind. pl. 43. f. 2. (male); Godart, Enc. M. ix. p. 573. n. 29. (male).

"In Indiis" (Fabricius).

3. LEM. PRETUS.

Papilio Pretus Fabricius, Mant. Ins. ii. p. 86. n. 783., Ent. Syst. iii. pt. 1. p. 333. n. 266.; Cramer, Pap. pl. 182. f. C. D.; Godart, Enc. M. ix. p. 570. n. 28. (Erycina Pr.).

(Cape of Good Hope, Fabricius).

4. LEM. HEBRUS.

Papilio Hebrus Fabricius, Mant. Ins. ii. p. 77. n. 700., Ent. Syst. iii. pt. 1. p. 301. n. 141.; Cramer, Pap. pl. 50. f. E. F.; Godart, Enc. M. ix. p. 570. n. 30.

Peplia Pelidna? Hübner, Verz. bek. Schm. p. 20. n. 141. Guiana, Brazil.

5. LEM. GLAUCOMA.

Periphlacis Glaucoma Hübner, Zutrage exot. Schm. f. 927, 928.

Brazil.

6. LEM. ALECTOR.

Hamanumida Alector Hübner, Zutrage exot. Schm. f. 983, 984.

Brazil.

7. LEM. ION.

Lemonias Ion Westw. nov. sp. §

Brazil.

B. M.

†† Eyes finely hirsute.

8. LEM. MERIS.

Papilio Meris Cramer, Pap. pl. 366. f. B. C.; Godart, Enc. M. ix. p. 570. n. 31.; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 5. (Calydna M.); Hübner, Verz. bek. Schm. p. 109. n. 1183. (Ætheius M.).

Erycina Agesilas Latreille in Humboldt, Obs. Zool. et Anat. i. p. 251. pl. 25. f. 7, 8.

Equinoctial America, Brazil, Columbia.

B. M.

** Wings not varied with metallic colours. (Anatole.)

9. LEM. GLAPHYRA.

Anatole Glaphyra Westwood MS.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 71. f. 3.

—?

B. M.

10. LEM. ZYGIA.

Anatole Zygia Hübner, Verz. bek. Schm. p. 24. n. 187.; E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 15. (Anatole Z.).

Lem. mac. Zygia Hübner, Samml. exot. Schm. Band i. pl. —.

Papilio Caletor Dalman, Anal. Ent. p. 44. n. 13.

Venezuela.

B. M.

11. LEM. EPONE.

Erycina Epone Godart, Enc. M. ix. p. 580. n. 76.

An Lem. Zygiæ var.?

Brazil.

12. LEM. EROSTRATUS.

Nymphidium Erostratus Boisduval MS.

Anatole Erostratus E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 15.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 71. f. 4.

Venezuela.

B. M.

B. Body rather slender. Wings rather weak in structure.

* Fore Wings generally elongate. (Calospila.)

13. LEM. LEUCOCYANA.

Echenais leucocyana Hübner, Zutrage, f. 915, 916.

Calospila Aristus E. Doubl. List Lep. Brit. Mus. pt. 2. p. 15.; Doubl. Westw. & Hewits. Gen. D. Lep. pl. 71. f. 12.

Para.

B. M.

14. LEM. ARISTUS.

Papilio Aristus Stoll, Suppl. Cram. Pap. pl. 39. f. 4. and 4 C. (female); Godart, Enc. M. ix. p. 580. n. 79. (Erycina A.).

Peplia Ariste Hübner, Verz. bek. Schm. p. 20. n. 142. Guiana, Brazil.

B. M.

15. LEM. LEUCOPHÆA.

Echenais leucophæa Hübner, Verz. bek. Schm. p. 19. n. 120., Samml. exot. Schm. Band ii. pl. —.

An Lem. leucocyanæ fœm.?

Para.

16. LEM. THERMODOE.

Calospila Thermodoe Hübner, Zutrage exot. Schm. f. 715, 716.; E. Doubl. List Lep. Brit. Mus. pt. 2. p. 15.

Papilio Parthaon Dalman, Anal. Ent. p. 46.

An Calosp. Zeanger mas?

Brazil.

B. M.

17. LEM. ZEANGER.

Papilio Zeanger Stoll, Suppl. Cram. Pap. pl. 37. f. 2. 2 B.; Godart, Enc. M. ix. p. 572. n. 36. (Erycina Z.).

Polystichtis Zeangira Hübner, Verz. bek. Schm. p. 18. n. 116.

Surinam.

B. M.

18. LEM. PENTHEUS.

Papilio Pentheus Fabricius, Mant. Ins. ii. p. 82. n. 734. (male), Ent. Syst. iii. pt. 1. p. 314. n. 186.; Cramer, Pap. pl. 143. f. E.; Godart, Enc. M. ix. p. 580. n.

§ L. alis supra nitidissime cæruleis; posticis ad angulum ani, apice abdominis, corporeque subtus albis; alis anticis maculis quinque oblongis nigris ante medium disci, costa irregulari margineque apicali nigro irroratis; alis posticis ad basin et angulum externum nigro maculatis; alis infra griseo-albis punctis parvis basalibus nigris, costa margineque obscuris, hoc nigro punctato; alis posticis serie submarginali punctorum nigrorum, in medio interrupta. Expans. alar. unc. 1½.

78. (*Erycina* P.); *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 15. (*Calospila* P.).
Anatole Penthea Hübner, Verz. bek. Schm. p. 24. n. 188.
 Guiana, Brazil. B. M.
19. LEM. PTOLOMEUS.
Hesperia Ptolomæus Fabricius, Ent. Syst. iii. pt. 1. p. 319. n. 209. (male); *Jones, Icon.* vi. pl. 36. f. 3.; *Donovan, Ins. of India*, pl. 46. f. 6.; *Godart, Enc. M.* ix. p. 572. n. 38. (*Erycina* Pt.).
Hesperia Lucius Fabricius, Ent. Syst. iii. pt. 1. p. 320. n. 211. (female); *Jones, Icon.* vi. pl. 39. f. 1.
 Brazil.
20. LEM. AGRIUS.
Papilio Agrius Dalman, Anal. Ent. p. 46.; *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 15. (*Calospila* Agr.).
 Brazil. B. M.
21. LEM. EMYLIUS.
Papilio Emylius Fabricius, Mant. Ins. ii. p. 78. n. 711., *Ent. Syst.* iii. pt. 1. p. 305. n. 154.; *Cramer*, pl. 66. f. G. H.; *Godart, Enc. M.* ix. p. 577. n. 64. (*Erycina* E.); *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 15. (*Calospila* E.).
Echenais Emylia Hübner, Verz. bek. Schm. p. 19. n. 121.
 Guiana, Brazil. B. M.
22. LEM. ÆMULIUS.
Hesperia Æmulius Fabricius, Ent. Syst. iii. pt. 1. p. 322. n. 19.; *Jones, Icon.* vi. t. 40. f. 4.; *Donovan, Ins. of India*, pl. 44. f. 2.; *Godart, Enc. M.* ix. p. 580. n. 75.
Nymphidium Geris Boisduval MS.; *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 15. (*Calospila*? G.).
 "In Indiis" (Fabr.).
- ** Fore Wings generally short, subtrigonal. (Lemonias.)
23. LEM. CHIA.
Echenais Chia Hübner, Verz. bek. Schm. p. 19. n. 125., *Zutrage exot. Schm.* f. 357, 358.
 Surinam.
24. LEM. NEPIA.
Lemonias Nepia E. Doubl. List Lep. Brit. Mus. pt. 2. p. 16.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 73. f. 2.
 Para, Venezuela. B. M.
25. LEM. EPULUS.
Papilio Epulus Fabricius, Mant. Ins. ii. p. 71. n. 680., *Ent. Syst.* iii. pt. 1. p. 292. n. 117.; *Cramer, Pap.* pl. 50. f. C. D.; *Godart, Enc. M.* ix. p. 585. n. 99. (*Erycina* E.); *Hübner, Samml. exot. Schm.* Band 1. pl. —. (*Lemonias* Ep.); *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 16. (*Lemonias* Ep.).
Hamearis Epule Hübner, Verz. bek. Schm. p. 19. n. 127.
 Guiana, Brazil. B. M.
26. LEM. CRISPUS.
Papilio Crispus Cramer, Pap. pl. 118. f. D. E.; *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 16. (*Lemonias* Crispus); *Hübner, Verz. bek. Schm.* p. 19. n. 123. (*Echenais* Crispus).
Hesperia Lucianus Fabricius, Ent. Syst. iii. pt. 1. p. 313. n. 185.; *Godart, Enc. M.* ix. p. 587. n. 113. (*Erycina* L.); *Hübner, Samml. exot. Schm.* Band 1. pl. —. (*Lemonias* Luciana), *Verz.* n. 122. (*Echen. Luc.*).
 Guiana, Antilles, Brazil, Pernambuco. B. M.
27. LEM. PSEUDO-CRISPUS.
Papilio Crispus Cramer, Pap. pl. 118. f. F.
 Brazil. B. M.
28. LEM. MISENES.
Papilio Misenes Cramer, Pap. pl. 117. f. D.; *Godart, Enc. M.* ix. p. 584. n. 96. (*Erycina* M.).
Echenais Misenessa Hübner, Verz. bek. Schm. p. 19. n. 119.
 Guiana.
29. LEM. IRENE.
Lemonias Irene Westw. nov. sp.†
 Para. Mus. Bates.

Genus XXXIII. LIMNAS.

LIMNAS *Boisduval*.
 MELANIS *Hübner*.

BODY moderately robust; fore wings oblong-ovate, black, varied with spots of blood-red and orange.

HEAD moderate-sized, rounded, clothed with short hairs.

Eyes large, lateral, naked.

Antennæ rather more than half the length of the fore wings, slender; articulations of moderate length, rather

† L. alis anticis subtrigonis, omnibus supra nigris plaga maxima subovali pone medium alba, in posticis cæruleo parum marginata, his etiam ad basin macula magna chermesina ornatis; alis infra pallide fuscis, omnibus plaga magna alba ut in pagina supera; posticis basi maculis parvis nigris triplici serie oblique coordinatis. Expans. alar. unc. 1½. Species insolita.

December 1. 1851.

indistinct; terminated by an elongated, rather robust, gradually formed club, having the tip slightly incurved and attenuated.

Labial Palpi very small and short, compressed, the tip not elevated higher than one third of the height of the eyes, and not extending in front beyond the hairs of the face, scaly; the terminal joint minute and subconical-ovate.

THORAX robust, finely hairy.

Fore Wings elongate, trigonate-ovate, entire. Costal margin nearly straight; apical angle rounded. Apical margin convex, two thirds of the length of the costal. Inner margin nearly straight, equal in length to the apical. Postcostal vein with three branches; the first and second arising before the anterior extremity of the discoidal cell; the third at some distance beyond it. The middle disco-cellular vein arising simultaneously with the upper discoidal, rather curved: the lower one nearly straight, uniting with the third branch of the median vein at a short distance beyond its origin.

Hind Wings short, subtrigonate, rounded at the outer angle. The hinder margin entire, subtruncate; anal angle rather prominent.

Fore Legs of the male very small, and very densely clothed with long fine hairs. *Fore Legs* of the female twice as long, slender, scaly. Tarsi with the joints gradually shortened and attenuated, armed beneath with a number of small fine spines. Ungues and their appendages small but produced.

Four Hind Legs long, slender, scaly. Tibiæ and tarsi armed beneath with fine spines. Ungues small, slender, acute, and strongly hooked.

The typical species of this genus constitute a numerous group, bearing a certain degree of resemblance to the butterflies of the genus *Acraea* in the elongated form of their fore wings, the ground colour of which is always black varied with small blood-red spots, and with orange-coloured marginal spots or edgings, or occasionally with an oblique bar across the middle of the fore wings. In some of the aberrant species the red spots are dilated into large patches, occupying the greater part of the disc of the wings; whilst in others the fore wings have a broad orange or yellow bar running parallel with the inner margin, accompanied by an oblique one near the tip of the wing. In *L. Barca* *Boisd.* *MS.* the latter spot is of the same rich orange colour as the basal bar, but in another species recently received from the River Amazon it is of a pale yellow, the basal one being orange red. Some of these aberrant species also differ from the typical ones in having the fore wings shorter and more triangular; but in all these species the palpi are very short, which separates them from the narrow-winged species of *Aricoris* which Mr. Doubleday gave under the generic name of *Setabis*. In the veining of their wings they are closely allied to *Aricoris*, *Nymphidium*, &c.

LIMNAS.

1. LIMN. SMITHIÆ.

Limnas Smithiæ *Boisduval MS.*; *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 17.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 73. f. 8.

Brazil.

B. M.

2. LIMN. MELANDER.

Papilio Melander *Cramer, Pap.* pl. 336. f. A. B.; *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 18. (*Limnas* M.).

Melanis Melandra *Hübner, Verz. bek. Schm.* p. 25. n. 198.

Hesperia Electron *Godart, Enc. M.* ix. p. 590. n. 130.

Guiana, Brazil, Venezuela, Honduras.

B. M.

3. LIMN. LYCEA.

Melanis Lycea *Hübner, Zutr.* f. 283, 284.; *Boisduval, Sp. gén.* ii. ined. (*Limnas* Ly.); *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 18. (*Limnas* L.).

Pernambuco.

B. M.

4. LIMN. PIXE.

Limnas Pixe *Boisduval, Spec. gén. Léop.* t. 20. f. 1.; *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 17.

Mexico, Honduras.

B. M.

5. LIMN. PHERECLUS.

Papilio Phereclus *Linnaeus, Syst. Nat.* ii. p. 792. n. 248., *Mus. Utr.* p. 326.; *Fabricius, Syst. Ent.* p. 529. n. 364., *Ent. Syst.* iii. pt. 1. p. 321. n. 217.; *Clerck,*

Icon. t. 45. f. 4.; *Cramer, Pap.* pl. 178. f. D.; *Godart, Enc. M.* ix. p. 590. n. 128. (*Erycina* P.).

Melanis Pherecla *Hübner, Verz. bek. Schm.* p. 25. n. 199.

Guiana, Brazil.

6. LIMN. HELIUS.

Papilio Helius *Fabricius, Mant. Ins.* ii. p. 85. n. 771., *Ent. Syst.* iii. pt. 1. p. 329. n. 248.; *Cramer, Pap.* pl. 198. f. B.; *Godart, Enc. M.* ix. p. 589. n. 124.

(*Erycina* ? H.).

Symmachia Ochima *Hübner, Verz. bek. Schm.* p. 26. n. 201.

West India.

7. LIMN. PHEREPHATTE.

Erycina Pherephatte *Godart, Enc. M.* ix. p. 590. n. 129.

Brazil.

8. LIMN. PROCAS.

Hesperia Procas *Fabricius, Ent. Syst.* iii. pt. 1. p. 308. n. 170.; *Jones, Icon.* vi. t. 55. f. 1.; *Cramer, Pap.* pl. 179. f. D.; *Godart, Enc. M.* ix. p. 586. n. 109.

(*Erycina* P.).

Brontiaides Procas *Hübner, Verz. bek. Schm.* n. 1228.

Surinam.

9. LIMN. INARIA.

Limnas Inaria *Boisduval MS.*; *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 17.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 73. f. 7.

South America, Brazil.

B. M.

Genus XXXIV. **THEMONE.***THEMONE* Westwood.*HELICOPIS* Hübner.*LIMNAS* p. *E. Doubleday.**ARICORIS* p. *Boisduval MS.*

BODY robust; black, with a broad lateral border of orange; (habit of certain exotic Callimorphæ): wings large, black, varied with large orange and yellow markings.

HEAD small, especially in the females, clothed with very short hairs.

Eyes rather large, naked in the typical species.

Labial Palpi very small, curved, compressed, scaly, the tip not elevated above the height of one fourth of the eyes, and not visible beyond the hairs of the face; terminal joint minute, elongate-conical.

Antennæ about half the length of the fore wings; articulations indistinct, not ringed with white; terminated by an elongated, moderately robust, gradually formed club (smaller in the females), obtuse at the tip.

THORAX robust. Tippets wide.

Fore Wings large (especially in the females), elongated-subtrigonal in the males. Costal margin nearly straight; apical angle obtuse. Apical margin entire, slightly convex in the male, much more strongly in the female. Postcostal vein with three branches; the first only arising before the anterior extremity of the discoidal cell; the second about one third, and the third at about two thirds, of the distance between the discoidal cell and the tip of the wing. Upper disco-cellular vein very minute: middle and lower ones forming an arch, the lower end of the latter uniting with the third branch of the median vein at a very short distance beyond its origin.

Hind Wings large, subovate, slightly scalloped in the females. Postcostal vein arising much nearer the body than the precostal. Upper disco-cellular vein oblique, arising at the base of the branch of the postcostal vein: lower one larger, oblique, slightly arched, uniting with the third branch of the median vein at its origin.

Fore Legs of the male slender, very densely clothed with long fine hairs. *Fore Legs* of the female about one third longer than those of the male, thick, scaly. Tarsi with the middle joints armed below with fine spines.

Four Hind Legs rather short, scaly. Tarsi armed beneath with very short slender spines.

ABDOMEN of the males elongate-conic; short and oval in the female.

The type of this genus is the *Helicopis* Pais of Hübner, a handsome insect, which in its general appearance bears considerable resemblance to *Methone* Cecilia and *Aricoris* Epitus. From both these, however, it differs in the arrangement of the branches of the postcostal vein of the fore wings; there being only one branch before the extremity of the discoidal cell instead of two, and from the latter it further differs in there being two branches beyond the cell instead of only one. In this respect it agrees with *Hesperia* Ouranus *Fabr.*, on which account I have added the latter to this genus, although it differs from *Th. Pais* in having hirsute eyes, longer palpi porrected considerably in front of the face, the end of the lower disco-cellular vein of the fore wings united with the third branch of the median vein at its origin, and the hind wings with the costal vein not reaching beyond the middle of the costa. Its situation, therefore, must be considered doubtful; but I know not where else to place it, when its peculiar style of colours and marking is taken into consideration.

THEMONE.

A. *Hind Wings* rounded.

a. *Eyes* naked. (*Themone* Westw.)

1. **THEM. PAIS.***

Themone Pais Westw. MS.; *Doubl. Westw. & Hewits.*
Gen. D. Lep. pl. 72, f. 9. (fem.).

Helicopis Pais Hübner, *Samml. exot. Schm.* Band 11. f.—,
Zutrage exot. Schm. f. 749, 750.; *E. Doubl. List Lep.*
Brit. Mus. pt. 2, p. 17. (*Limnas*? P.).

Papilio Halius? *Dalman, Anal. Entomol.* p. 45. n. 16.

(Female) *Limnas*? *Phormis* *E. Doubl. List Lep. Brit.*
Mus. 11. p. 19.

Brazil.

B. M.

* The male of this species differs in its more triangular fore wings, and in wanting the white tip in those wings, and the row of yellow lunules and white marginal spots of the hind wings. The female is given by Mr. E. Doubleday as a distinct species.

b. *Eyes* hirsute. *Upper disco-cellular vein of Fore Wings* short, longitudinal. (Nothème Westw.)

2. THEM. (NOTHEME) OURANUS.

Hesperia Ouranus Fabricius, *Ent. Syst.* iii. pt. 1. p. 317. n. 200.; *Cramer, Pap.* pl. 335. f. C.*; *Jones, Icon.* vi. t. 55. f. 4.; *Godart, Enc. M.* ix. p. 574. n. 49.; *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 5. (*Eurygona?* O.).
Bæotis Uranus Hübner, *Ferz. bek. Schm.* p. 21. n. 157.
 Guiana, Brazil, Columbia. B. M.

B. *Hind Wings* angulated at the anal angle. *Eyes* naked. *Upper disco-cellular vein of Fore Wings* obsolete. *Upper discoidal arising* at a short distance beyond the discoidal cell. (Monethe Westw.)

3. THEM. MONETHE ALPHONSUS.

Hesperia Alphonsus Fabricius, *Ent. Syst.* iii. pt. 1. p. 308. n. 171.; *Jones, Icon.* vi. t. 55. f. 3.; *Godart Enc. M.* ix. p. 586. n. 108. (*Erycina A.*); *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 17. (*Limnas Alph.*).
 Surinam, Brazil, Bolivia. B. M.

Genus XXXV. SISEME.

SISEME Westwood.

EURYGONA p. E. Doubleday.

BODY moderately robust; wings dark-coloured, with a broad bar of white across the disk of all the wings; the hind ones narrowed to the anal angle, near which is a small transverse reddish spot.

HEAD small, slightly tufted in front of the face.

Eyes moderate-sized, finely hirsute.

Antennæ slender; joints rather indistinct, slightly ringed with white; terminated by a long moderately thick club, obtuse at the tip, and slightly incurved.

Labial Palpi small, porrected obliquely upwards to about the level of the middle of the eyes, compressed, scaly, slightly hairy beneath; the terminal joint slender, elongate, conic-ovate, visible in front of the hairs of the face from above.

THORAX moderately robust, and finely hairy.

Fore Wings of moderate size, subtrigonal. Costal margin nearly straight, except at the base and apex; apical angle subacute. Apical margin slightly convex, entire. Postcostal vein with three branches; the first and second arising before the anterior extremity of the discoidal cell, and the third considerably beyond it. Upper disco-cellular vein obsolete; the upper discoidal arising at a short distance beyond the discoidal cell: the middle and lower disco-cellular veins forming an arch, uniting with the third branch of the median vein close to its origin.

Hind Wings elongate, being produced towards the anal angle; the posterior margin in the typical species being somewhat obliquely emarginate from the outer to near the anal angle. The upper disco-cellular vein arising close to the branch of the postcostal vein, and the lower one uniting with the third branch of the median vein close to its origin.

Fore Legs of the male rather longer than usual, slender, and densely clothed with long fine silky hairs.

Four Hind Legs long (especially the middle femora), clothed with long fine scales, and the femora moderately beneath with longish hairs. Tibiæ with a few very short fine spines beneath. Tarsi more thickly spined beneath, especially at the tips of the joints.

ABDOMEN small, elongate-conic.

The insects composing this genus are of rather small size, having the wings of a brown colour, all of them being traversed by a broad bar of white, running obliquely from the middle of the fore wings to beyond the middle of the hind ones, followed by a smaller bar of the same colour in each of the wings. In this respect, and especially in the elongated hind wings (gradually narrowed towards the anal angle), these insects come very close to those species of *Nymphidium* which have similarly shaped and marked wings, such as *N. Belise* and a fine undescribed species (*N. Lycorias*) destitute of the blue tints of the male of *Belise*. The veins of the wings are also arranged in nearly the same manner, but the eyes are finely hirsute. The species have a certain resemblance also with some of the species of *Erycina*, especially in the form of the hind wings and the orange red spot near the anal angle; but the arrangement of the wing veins at once proves that the affinity of the genus is much nearer to *Nymphidium*. There are four species of this genus in the British Museum collection, one only of which has been hitherto described.

* Cramer's figure appears to have been drawn from a mutilated specimen, as it represents the hind wings as angulated at the anal angle.

SISEME.

1. SIS. ARISTOTELES.

Erycina Aristoteles Latreille in *Humboldt, Observ. Zool. et Anat.* v. 1. p. 243. pl. 24. f. 5, 6.; *Godart, Enc. M.* ix. p. 565. n. 10.; *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 5. (*Eurygona?* A.).
Erycina Pallas Latreille, *op. cit.* p. 244. f. 24. f. 7, 8. (var.)
 Rio Magdalena (South America), New Granada. B. M.

2. SIS. ALECTRYO.

Siseme Alectryo Westw. *MS.**; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 72. f. 10.
Eurygona? Alectryo *E. Doubleday, List Lep. Brit. Mus.* p.
 Columbia. B. M.

Genus XXXVI. EUNOGYRA Westwood.

BODY rather slender; wings large, rounded, obscurely coloured with a submarginal row of confluent ocelli.

HEAD small, rounded, clothed with very fine hairs.

Eyes prominent, naked.

Antennæ short, slender; joints moderately distinct, slightly ringed with white; terminated by a small but distinct club, with the tip rather acute and slightly incurved.

Labial Palpi very minute, much curved, compressed, applied close to the face, not reaching higher than one fourth of the eyes, and not visible beyond the hairs of the face from above, finely hairy beneath; terminal joint very minute, scarcely distinct.

THORAX small, finely hairy.

Fore Wings large. Costal margin regularly arched; apical angle rounded. Apical margin convex, entire; hinder angle rounded. Inner margin straight, long. Costal vein short, not extending to the middle of the costa; near the tip it throws off a short branch, which runs obliquely (in the direction of the upper discoidal vein) and joins the first branch of the postcostal vein close to its origin. Postcostal vein with four branches; the first and second arising before the anterior extremity of the discoidal cell, the third at about three fourths, and the fifth at about five sixths, of the length of the wing; the terminal part of the postcostal vein extending to the tip of the wing. Upper disco-cellular vein obsolete: the middle one arising simultaneously with the upper discoidal, at a small distance beyond the extremity of the discoidal cell: the middle and lower disco-cellular veins uniting to form a strong arch, by uniting with the third branch of the median vein at a short distance beyond its origin.

Hind Wings subovate-trigonal. Costal margin slightly curved. Apical margin strongly rounded. Costal vein scarcely extending beyond one fourth of the length of the costa. Precostal arched, finely attenuated. Postcostal arising opposite to the precostal, branching at about one third of the length of the wing, its branch joining to the costa at about two thirds of its length, the remainder of the postcostal itself reaching to the outer angle of the wing. Upper disco-cellular arising at a very short distance beyond the branch of the postcostal, slender, oblique: lower disco-cellular longer, rather less oblique, uniting with the third branch of the median vein at about the same distance beyond the origin of the latter as exists between the first and second branches, closing the discoidal cell in an acute point.

Fore Legs of the male extremely short, rather thick, and clothed with very short scaly hairs.

Fore Legs of the female?

Four Hind Legs rather short, scaly. Tarsi rather thick; the four terminal joints equally short. Ungues and appendages minute.

I have been compelled to institute another new genus for the reception of a dull-coloured species of small size, having much the appearance of some of the Satyridæ, differing from all of the preceding genera in the arrangement of the veins of its wings, as well as partially so in various other characters. I have hitherto nowhere else observed the branching of the costal vein described above, and it is only in very few of the species of this family, chiefly the earlier-described genera, that a four-branched postcostal vein occurs. Having examined several specimens, I am able to state that the peculiar veining described above is a constant character. Its style of marking is also quite unlike that of any other species in the family.

EUNOGYRA.

1. EUN. SATYRUS.

Eunogyra Satyrus Westw. nov. sp.†; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 72. f. 11.
 Para. B. M.

* S. alis fuscis, fascia obliqua communi alba e medio anticarum ultra medium posticarum extensa utrinque attenuata, anticis etiam fasciola alba pone medium posticisque macula transversa alba inter fasciam et marginem in fasciolam griseam indeterminatam posita; maculaque oblonga subbipartita aurantio-rufa ad angulum analem; alis subtus similiter coloratis basi autem griseis. Expans. alar. sp. præced.

† E. alis supra nigricantibus versus apicem paullo pallidioribus, striolis duabus parallelis communibus submarginalibus luteis parum interruptis seriem conjunctam macularum nigrarum includentibus; alis infra fuscis, striga indistincta obscura ante alteraque magis distincta et subundata pone medium nigris, maculis nigris submarginalibus paginæ superæ magis distinctis et ocellos luteo cinctos formantibus. Expans. alar. antic. unc. 1½.

Genus XXXVII. PARNES.

PARNES *E. Doubleday*.

BODY very small, slender; wings large, rounded, of a uniform dark colour above, with submarginal ocelli beneath.

HEAD as broad as the thorax, clothed with fine hairs, which are longest on the crown.

Antennæ more than half the length of the fore wings, rather robust, annulated with white; terminated by a long, gradually formed, compressed club, obtuse at the tip.

Eyes large, naked.

Labial Palpi small, compressed, elevated to about the height of one third of the eyes, not visible from above, clothed beneath with long detached scales; terminal joint small, slender, acute, and nearly naked.

THORAX rather small.

Fore Wings large, rounded, entire. Costal margin strongly and regularly arched from the base to the apical angle, which is obtuse. Apical margin convex, fringe very long. Costal vein not extending to half the length of the fore wings. Postcostal vein with three branches; the first arising at a considerable distance before the anterior extremity of the discoidal cell, uniting with the costal vein for a short distance, and then branching off, joining the costa nearly opposite to the extremity of the discoidal cell; second branch of the postcostal also arising before the extremity of the cell; third branch short, arising at more than half the distance between the cell and the tip of the wing, the terminal part of the vein running to the tip of the wing. Upper disco-cellular vein obliquely longitudinal, very short: middle one much longer, transverse, slightly arched: lower one transverse, rather longer, uniting with the third branch of the median vein at a short distance beyond its origin.

Hind Wings rather small, irregularly subovate, entire, with long fringes. Costal vein not reaching beyond half the length of the costa. Postcostal arising nearer the base of the wing than the precostal (which is small and curved), branching at a considerable distance from its base. Upper disco-cellular vein very slender, almost obsolete, arising at a very short distance beyond the branch of the postcostal, transverse: lower disco-cellular apparently obsolete.

Fore Legs of the male — ?; of the female small, slender, and regularly formed, scaly. Tibiæ shorter rather than the femur or tarsus, the latter regularly articulated.

Four Hind Legs rather short, scaly; intermediate femora elongated; two posterior tibiæ of equal length with the femora, rather swollen; tarsi of the hind pair of legs considerably elongated. Tibiæ and tarsi not, or scarcely, armed beneath with fine spines. Ungues and pulvilli minute.

ABDOMEN small, slender.

This genus is formed for the reception of two very small species of butterflies, natives of Para, remarkable for the dull and uniform dark colour of the upper surface of the wings, and the ocellation of the outer margin of the wings on the under side; the two ocelli, separated by the lower discoidal vein of the fore wings and by the discoidal vein of the hind ones, being united into a large black oval patch, bearing two small white dots. *P. Nycteis*, represented in our Plate LXXIII., has, moreover, the disc of all the wings beneath dull fulvous buff, marked with a number of minute transverse streaks; whilst *P. Philotes* has them uniform dull fulvous buff. On the whole, the insects bear a certain general resemblance to the small dark-brown species of *Polyommatus*, whilst the style of the arrangement of the ocelli reminds us of *Eunogyra* and some of the smaller *Satyridæ*. The junction and subsequent separation of the first branch of the postcostal and the costal veins is especially worthy of notice.

PARNES.

1. PARNES NYCTEIS.

Parnes Nycteis Boisduval MS.; E. Doubleday, List Lep.

Brit. Mus. pt. 2. p. 18.; *Doubl. Westw. & Hewitts. Gen.*

D. Lep. pl. 73. f. 3.

Para.

B. M.

2. PARNES PHILOTES.

Parnes Philotes E. Doubleday, List Lep. Brit. Mus. II.

p. 18.

Para.

B. M.

Genus XXXVIII. ISAPIS.

ISAPIS *E. Doubleday.*MELANIS *p. Hübner.*

BODY robust: fore wings elongate-triangular, black, slightly glossed with purple, and bearing an oblique fulvous bar beyond the middle; hind wings small, subtruncate, with the anal angle slightly prominent in the females.

HEAD broad, clothed with closely appressed hairs, those on the crown forming a transverse tuft.

Eyes large, prominent, naked.

Antennæ long; articulations indistinct, not annulated with white; terminated by a long, gradually formed, robust club, curved at the tip, and obtuse.

Labial Palpi minute, compressed, not visible from above, and not extending upwards above the level of one fourth of the eyes, so that they are nearly horizontal; clothed beneath with fine hairs; terminal joint minute, elongate-ovate in the males, shorter and more ovate in the females, and nearly naked.

THORAX robust.

Fore Wings elongate-subtriangular. Costal margin nearly straight, except at the tip; apical angle subobtuse. Apical margin considerably convex in the females, much less so in the males. Inner margin nearly straight. Costal vein reaching to about the middle of the costa. Postcostal vein with only two branches; the first branch arising at a short distance beyond the discoidal cell, the postcostal itself being slightly angulated at a little distance beyond the first branch where the discoidal cell terminates; the second branch of the postcostal arising at about half the distance between the extremity of the discoidal cell and the tip of the wing; the extremity of the postcostal vein running to the tip; the upper discoidal vein forming, as it were, the continuation of the postcostal vein beyond the angle following the first branch of the postcostal. Upper disco-cellular wanting; middle one short, nearly transverse, slightly curved; arising before the first branch of the postcostal vein: lower disco-cellular longer and more oblique, uniting with the third branch of the median vein at a short distance beyond its origin.

Hind Wings small, broad, not longer than the abdomen in the males; subtruncate along the outer margin. Costal vein extending about five sixths of the length of the costa. Postcostal branching at a moderate distance from its base, arising much nearer the body than the precostal. Upper and lower disco-cellular veins very slender, oblique, nearly in the same line; the former arising just beyond the branch of the postcostal, and the latter united with the third branch of the median vein just beyond its origin.

Fore Legs of the male minute, thick, rather densely clothed with fine hairs. Tarsus elongate-oval, entire. *Fore Legs* of the female nearly three times the length of those of the male, slender, scaly. Tarsal joints armed beneath with fine spines.

Four Hind Legs rather elongate, scaly; two hinder tibiae swollen and curved. Tarsi and tibiae finely spined beneath. Ungues prominent, curved, very acute; pulvillus broad; lateral appendages minute.

ABDOMEN of the male considerably elongate; of the female shorter, ovate.

The species of which this genus is formed bears considerable resemblance to those of *Limnas*, especially in the style of its colours; but it is at once distinguished from that, and, indeed, every other genus in the present family, by the postcostal vein of the fore wings having only two branches, and the discoidal cell being closed previously to the emission of either of the postcostal branches. The under side of the typical species, in addition to the fascia beyond the middle of the fore wings, is marked with a pale yellow bar running across all the wings close to the body.

ISAPIS.

1. ISAPIS AGYRTUS.

Papilio Agyrtus Cramer, *Pap.* pl. 183. f. B. C.; *Godart, Enc. M.* ix. p. 590. n. 120. (*Erycina* A.); *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 18. (*Isapis* A.); *Doubl. Westw. & Hewits. Gen.*

D. Lep. pl. 72. f. 5.

Melanis Agyrte Hübner, *Verz. bck. Schm.* p. 25. n. 200.
Surinam, Brazil, Pernambuco.

B. M.

Genus XXXIX. **STALACHTIS.***STALACHTIS* *Hübner.**NERIAS* *Boisduval.**HELICONIA* *p. Godt.**ACRÆA* *p. Perty.*

BODY elongated, slender; fore wings greatly elongated, considerably varied with spots and markings of black and white.

HEAD moderate-sized, clothed with fine hairs, and marked with small white dots.

Eyes prominent, naked.

Antennæ moderately elongated, slender, not annulated with white; terminated by a long, slender, gradually formed club, incurved at the tip, which is rather acute.

Labial Palpi varying a little in length in the different species, slender, compressed, clothed with scaly hairs; the tip not elevated above the height of one third of the eye; and in some species not, in others the terminal joint, visible in front of the head from above; this joint being slender and elongate-ovate.

THORAX robust, but small.

Fore Wings large, elongate-ovate, or elongate-subtriangular. The costal margin arched; apical angle rounded. Apical margin entire, and more or less convex, being considerably so in *St. Calliope*, and much less so in *St. Phlegia*. Inner margin varying in length according to the form of the wing, nearly straight. Costal vein extending beyond the middle of the costa. Postcostal with three branches; the first and second arising before the anterior extremity of the discoidal cell, and the third about half way between the cell and the tip of the wing. Upper disco-cellular obsolete: middle one arising conjointly with the upper discoidal, and forming, with the lower disco-cellular, a moderate curve, united with the third branch of the median vein at about the same distance from its origin as exists between the first and second branches.

Hind Wings short-ovate, entire. Costal vein extending about four fifths of the length of the costa. Postcostal curved at its base, extending into the disc of the wing, nearly opposite to the precostal, branching at a considerable distance from its origin. Upper disco-cellular vein arising a little before or a little beyond the origin of the branch of the postcostal; forming, with the lower disco-cellular, a slight curve, and uniting with the third branch of the median vein at a moderate distance beyond its origin.

Fore Legs of the male very minute, and very densely clothed with long hairs. *Fore Legs* of the female much longer, and articulated as in *Limnas*.

Four Hind Legs long, slender, scaly. Tibiæ and tarsi armed beneath with very minute spines. Ungues and their appendages minute, concealed above by the thick coating of scales of the produced upper extremity of the terminal joint of the tarsus.

ABDOMEN greatly elongated, especially in the males; shorter and more ovate in the females.

CATERPILLAR cylindrical, rather thickened; the sides of the body armed with fleshy elongated filaments, or thick spines.

CHRYSA LIS entire, finely hairy; head obtuse.

The insects of this genus are amongst the largest of the present family, and present so great a resemblance to the Heliconian butterflies that they were united with them by the older writers, and even by Godart. They are structurally very closely allied to *Limnas*, but are distinguished at once by their long slender antennæ, and spotted markings of their wings.

The Caterpillar of *H. Calliope*, according to Stoll, is of a reddish fulvous colour; the head black, marked with a reddish Y-shaped line; the first segment with two patches of velvety black, and a row of black dots down the back. The sides of the body are clothed with long hairs; one on each side of each segment appearing larger than the rest. The Chrysalis is whitish, with several rows of black dots, and clothed with fine hairs. The Caterpillar of *H. Euterpe*, according to the same author, is green with a reddish head, and with eight elongated fleshy filaments on each side of the body, following the segment which bears the third pair of legs. It feeds on the *Musa*, and remains in the chrysalis state only ten days.

STALACHTIS.1. *ST. EUTERPE.*

Papilio Euterpe *Linnaeus*, *Syst. Nat.* ii. p. 756. n. 61.; *Cramer*, *Pap.* t. 246. f. D.; *Jones*, *Icones*, ii. t. 27. f. 1.; *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 178. n. 552.; *Godart*, *Enc. M.* ix. p. 225. n. 60. (*Heliconia* *Eut.*); *Hübner*, *Verz. bek. Schm.* p. 27. n. 206. (*Stalachtis*

Eut.); *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 19. (*Stalachtis* *Eut.*).

Brazil.

B. M.

2. *ST. CALLIOPE.*

Papilio Calliope *Linnaeus*, *Syst. Nat.* ii. p. 755. n. 56.;

Clerck, Icones, t. 41. f. 4.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 160. n. 493.; *Cramer, Pap.* pl. 246. f. C. and 133. f. F.; *Jones, Icon.* t. ii. pl. 19. f. 1.; *Godart, Enc. M.* ix. p. 225. n. 65. (*Heliconia C.*); *E. Doubleday, List Lep. Brit. Mus.* pt. 2. p. 19. (*Stalachtis Call.*); *Hübner, Verz. bek. Schm.* p. 27. n. 208.

Brazil.

B. M.

3. ST. MAGDALENÆ.

Nerias Magdalensæ Boisduval MS.

Stalachtis Magdalensæ E. Doubl. List Lep. Brit. Mus. pt. 2. p. 19.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 73. f. 6.

New Granada.

B. M.

4. ST. SUSANNA.

Stalachtis Susanna Hübner, Zutrage exot. Schm. f. 425, 426.; *Boisduval, Sp. gén. Léop.* pl. 11. f. 6.; *E. Doubl. List Lep. Brit. Mus.* pt. 1. p. 64. (*Nerias Sus.*), pt. 2. p. 19. (*Stalachtis Sus.*).

Brazil.

B. M.

5. ST. PHLEGIA.

Papilio Phlegæus Fabricius, Spec. Ins. ii. p. 127. n. 577.; *Cramer, Pap.* pl. 197. f. F. and 236. f. C.

Stalachtis Phlegia Hübner, Verz. bek. Schm. p. 27. n. 205., *Samml. exot. Schm.* Band 1. pl. —.; *E. Doubl. List Lep. Brit. Mus.* pt. 1. p. 64. (*Nerias Phl.*), pt. 2. p. 19. (*Stalachtis Phl.*); *Godart, Enc. M.* ix. p. 226. n. 68. (*Heliconia Phl.*).

Var. ? *Acræa Phlegetontia Perty, Del. An. Art. Braz.* t. 30. f. 2.

Surinam.

B. M.

6. ST. PHÆDUSA.

Stalachtis Phædusa Hübner, Zutr. exot. Schm. f. 13, 14., *Hübner, Verz. bek. Schm.* p. 27. n. 207.; *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 19.

Para.

B. M.

7. ST. ZEPHYRITIS.

Papilio Zephyritis Dalm. Anal. Entomol. p. 47. n. 20. Brazil.

8. ST. LINEATA.

Nerias lineata Guérin, Iconographie du Règne An. Ins. p. 473.

Para.

SPECIES OF ERYCINIDÆ

which I have not been able to refer to their modern Genera.

1. *HESPERIA ARCHIMEDES Fabricius, Ent. Syst.* iii. pt. 1. p. 320. n. 210.; *Jones, Icones*, vi. t. 36. f. 4.; *Godart, Enc. M.* ix. p. 584. n. 93. (*Erycina A.*).
"In Indiis" (*Fabricius*).

2. *HESPERIA VIRGILIUS Fabricius, Ent. Syst.* iii. pt. 1. p. 323. n. 226.; *Godart, Enc. M.* ix. p. 584. n. 94. (*Erycina V.*).
"In Indiis" (*Fabricius*).

3. *ERYCINA EUPOLEMIA Godart, Enc. M.* ix. p. 572. n. 37.
America.

4. *ERYCINA STILBE Godart, Enc. M.* ix. p. 574. n. 47.
Brazil.

5. *ERYCINA ANAPIS Godart, Enc. M.* ix. p. 576. n. 57.
Brazil.

6. *ERYCINA ISALA Godart, Enc. M.* ix. p. 579. n. 72.
South America.

7. *PAPILIO POLYMENUS Fabricius, Ent. Syst.* iii. pt. 1. p. 54. n. 166.; *Jones, Icon.* v. t. 13. f. 2.; *Godart, Enc. M.* ix. p. 585. n. 102. (*Erycina P.*).
Surinam.

8. *PAPILIO ÆGON Fabricius, Mant. Ins.* ii. p. 83. n. 759., *Ent. Syst.* iii. pt. 1. p. 324. n. 231.; *Godart, Enc. M.* ix. p. 587. n. 111. (*Erycina Ædon*).
Jamaica.

9. *PAPILIO ARGENISSA Stoll, Suppl. Cramer, Pap.* pl. 27. f. 4. 4 C.
Caffaria.

10. *POLYSTICTIS OCYFORE Hübner, Zutrage exot. Schm.* f. 989, 990.
Africa?

11. *EMESIS LEOSIDA Boisduval, Voy. de l'Astrolabe, Entomol.* pt. 1. p. 65.; *Guérin, Voy. Coquille, Zoologie*, p. 275.
Argynnis pulchra Guér. Voy. Coquille, Zoologie, Atlas, Ins. n. 16. f. 2, 3.
Dory, New Guinea.

12. *HESPERIA TARQUINIUS Fabricius, Ent. Syst.* iii. pt. 1. p. 319. n. 207.; *Jones, Icon.* vi. t. 45. f. 4.; *Donovan, Ins. of India*, pl. 44. f. 11.; *Godart, Enc. M.* ix. p. 580. n. 77. (*Erycina T.*).
West Indies.

13. *HESPERIA LUCANUS Fabricius, Ent. Syst.* iii. pt. 1. p. 322. n. 221.; *Jones, Icon.* vi. t. 36. f. 3.; *Godart, Enc. M.* ix. p. 586. n. 107.; *Donovan, Ins. of India*, pl. 43. f. 4.
"In Indiis."

14. *AGATHINA MARGARETTA White in Zoologist*, i. p. 28.; *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 8.
Honduras.

B. M.

Obs. *Arisba Agacles* of *E. Doubleday's List of the Lepidoptera in the British Museum Collection* (pt. ii. p. 11.) belongs to the *Nymphalidæ*. See *antè*, p. 235.

Family XIV. LYCÆNIDÆ.

LYCÆNIDÆ and EUMEIDÆ *E. Doubleday.*

LYCÉNIDES and EUMÉNIDES *Boisduval.*

POLYOMMATIDÆ *Swainson, olim.*

ERYCINIDÆ *p. Swainson, Cab. Cycl.*

VERMIFORM STIRPS *Horsfield.*

INSECTS of small size. Body generally comparatively slender.

HEAD moderate-sized, often with a small tuft of hairs at the base of the antennæ.

Eyes often hirsute.

Antennæ generally shorter than half the length of the costa of the fore wings, often ringed with white, and terminated by an elongated distinct club.

Labial Palpi rather elongate; terminal joint slender, horizontal, nearly naked.

Wings often marked beneath with ocellated spots.

WINGS. *Fore Wings* with two or three branches only to the postcostal vein. Discoidal cell generally narrow, owing to the distance between the costal and postcostal veins; closed over the back when at rest.

Hind Wings with the outer margin often produced into one or more slender tails near the anal angle. Anal margin scarcely forming a groove for the reception of the abdomen. Precostal vein apparently wanting; discoidal cell closed by very slender disco-cellular veins.

LEGS. *Fore Legs* evidently smaller in proportion than the rest, nearly alike in size and shape in the two sexes; not brush-like in the males, but furnished with a long exarticulate tarsus, having several curved hooklets at the tip, distinct from the unguis. Fore legs of the female with the tarsus articulated like the hind legs.

Hind Legs slender, scaly. Hind tibia with only one pair of spurs, sometimes very minute. Unguis minute, scarcely exerted.

CATERPILLAR short, broad, flattened, usually naked, resembling a wood-louse; head very minute; occasionally finely hairy, or with the surface wrinkled.

CHRYSALIS short, thick, obtuse at each end; attached by the tail, and girt by a silk thread across the middle of the body.

This is a very extensive family of small, but generally extremely beautiful, butterflies, the European representatives of which are known by the names of "Blues," "Coppers," and "Hair-streaks;" the two former from the prevailing colour of the upper surface, and the latter from the peculiar slender lines on the under surface, of the wings of the various species: but many of the exotic species far outstrip their European brethren in the brilliancy of their colours. Many of them are rapid in their flight, sailing over the tops of oaks or other trees, upon which they have passed their preparatory states; others are, however, slower in their movements, flying over low grass and herbage. They are distinguished by the apparent identity of the fore tarsi in the two sexes. When, however, those of the males are denuded of their scales, it is discovered that they consist only of a single exarticulate joint, without regular unguis at the extremity, thus differing from the Erycinidæ, in which the minute legs of the males are generally brush-like, and clothed with very long hairs.

The transformations of many of the European species have been figured by Hübner, Boisduval, and Godart. Those of various North American species are represented by Abbot and Smith, and also by Boisduval and Léconte, in their works upon the Lepidoptera of the United States; whilst we are indebted to Dr. Horsfield for the knowledge of the preparatory states of numerous Javanese species; the larvæ of which vary considerably in their form; some exhibiting a much slighter resemblance to wood-lice than others. Some are very rough on the upper surface of the body; and that of *Thecla Xenophon* has several rows of fascicles of short hairs. It is chiefly upon the leaves of plants and trees that they feed: but a beautiful Indian species (*Thecla Isocrates*) resides within the pomegranate in the caterpillar state, several (seven or eight) being found in one fruit; in which, after consuming the interior, they assume the chrysalis state, each having first gnawed a hole through the rind of the fruit for the escape of the future butterfly, and carefully attached the footstalk to the branch by a coating of silk to prevent its falling, as described in my paper on this species in the *Trans. Entomological Society*, vol. ii.

The species of this family are very numerous, there being probably as many as six or seven hundred in our collections; the different groups, however, seem to be considerably restricted in their geographical range: the small blues, our *Lycenæ*, are, for the most part European; a few species only occurring in North America, India, and New Holland. They are, on the contrary, nearly if not entirely unknown

in South America. Many species of *Thecla* occur in Europe and North America; but their metropolis is South America, where, in size and brilliancy, they far excel those of more temperate regions. The *Theclides* of the East compose the genera *Myrina*, *Amplypodia*, *Ilerda*, *Dipsas*, *Ataxas*, and *Aphnæus*; whilst those of Africa constitute the genera *Iolaus* and *Anthene*; and those of New Holland that of *Ialmenus*. The copper butterflies are, for the most part, European; a few species are, however, scattered over most parts of the world. The small British species, *Phlæas*, appears also to inhabit both North America and India.

With regard to the relations of this family, it appears to form an interesting link between the species which have the chrysalis state girt across the body (*Papilionidæ*), and those which have the fore tarsus of the males exarticulate (*Nymphalidæ*, *Erycinidæ*). M. Boisduval accordingly places it immediately after our *Papilionidæ*, followed by the *Erycinidæ* and the species with suspended chrysalides.

The genus *Eumæus* (*Eumenia* *Godart*) has been separated into a distinct family by Boisduval and E. Doubleday; but, upon a careful examination of its structural details, united to a knowledge of its chrysalis state, for which I am indebted to Dr. Boisduval, I have no hesitation in uniting it with the present family.

Genus 1. EUMÆUS.

EUMÆUS *Hübner*.

EUMENIA *Godart*.

Body slightly robust; wings large, entire; those of the male more suffused with metallic scales above than those of the female; under side marked with numerous patches of metallic scales.

HEAD moderate-sized, with a slight transverse tuft on the crown.

Eyes large, naked.

Antennæ short, thick; joints short, not ringed with white; terminated by a long and gradually formed, but not thick club.

Labial Palpi horizontally porrected, clothed with very closely pressed scales; the tip extending about twice the length of the head. Terminal joint slender, about one third the length of the second joint (rather longer and more ovate in the female).

THORAX moderately robust, clothed with very fine hairs.

Fore Wings large, entire, rounded; the apical margin in the female more convex than that in the male. Costal vein extending to two thirds of the length of the costa. Postcostal vein emitting two branches only, both arising considerably before the anterior extremity of the discoidal cell, the terminal portion of the vein extending to the rounded tip of the wing; upper discoidal vein arising, at a short distance beyond the cell, from the postcostal, of which indeed it might be considered as the terminal portion. Upper disco-cellular vein obsolete: middle and lower ones of equal length, short, slender; the middle one arising at about the same distance beyond the second branch of the postcostal, as exists between the first and second branches; the lower one uniting with the third branch of the median vein at about the same distance from its origin as exists between the first and second median branches.

Hind Wings sub-ovate, entire along the outer margin. Costal vein extending to the rounded outer angle; pre-costal apparently obsolete; postcostal arising near the body, branching at a moderate distance from the base. Upper and lower disco-cellular very slender, oblique, and of nearly equal length, forming nearly a continuous line as long as the space between the base of the branch of the postcostal and the origin of the upper disco-cellular; the lower one uniting with the third branch of the median vein at a short distance from its base.

Fore Legs about two thirds the length of the hind ones; in both sexes clothed with scales, and of nearly equal length. The tarsus of the male formed of a single joint, armed beneath with numerous fine spines, as well as at the tip: those of the female five-jointed; the three intermediate joints equally short; the fifth furnished with claws and their appendages.

Hind Legs moderately long and scaly; the intermediate femora with a small produced lobe near the tip, the tibiæ having a corresponding impression near the base. Tarsi with very small claws, rather obtuse, and furnished with a small obtuse tooth below the apex on the under side. Pulvillus small, heart-shaped, notched in the middle in front. Pseudonychia broad, very short, thin, membranous, obliquely truncated, and finely setose.

ABDOMEN of the male furnished on each side at the tip with a long tuft of hair. Terminal joint truncate at the tip, hollow beneath, emitting two very slender horny setæ, and a longer slender horny piece, rather dilated at the tip.

CHRYSLIS short, very robust, convex, and entire, obtuse at each end; the centre of the thorax-case raised

into a slight conical protuberance; girt across the wing-cases, near their base, and at the junction of the first and second segments of the abdomen, by a very fine silken thread, as well as attached by the extremity of the body.

This genus consists of a few handsome species, remarkable for their metallic patches of golden green or greenish blue upon a velvety black ground. Our figure, in Plate LXXIV., represents a male insect. The female has the fore wings above suffused with green scales towards the costa. In both sexes the under sides of the wings are alike; being black with a crimson patch opposite the extremity of the body, and with three rows of golden green spots beyond the middle of the hind wings. The other species differ in the number and position of the spots. The known species are natives of the West Indian Islands, and adjacent parts of the American continent. The very gradually formed club of the short and rather robust antennæ, and the horizontally porrected palpi will serve to distinguish this genus from the following.

EUMÆUS.

1. EUM. DEBORA.

Eumenia Debora Geyer-Hübner, *Samml. exot. Schm.* Band III. pl. —.

Eumenia Childrenæ G. R. Gray in *Griff. An. K. Ins.* II. t. 112. p. 677.

Mexico.

B. M.

2. EUM. MINYAS.

Rusticus ad. *Minyas* Hübner, *Samml. exot. Schm.* Band I. pl. —; *Boisduval*, *Sp. gén. Léop.* I. t. 21. f. 6.

Eumenia Toxea Godart, *Enc. M.* IX. p. 826; *Lucas*, *Hist. n. Lep. ex.* pl. 79. f. 1.

Honduras.

B. M.

3. EUM. ATALA.

Eumenia Atala Poey, *Cent. Lep. Cuba*, decad. I. (1832); *Guérin*, *Icon. R. An. Insectes*, texte p. 489; *Doubl.*

Westw. & Hewits. Gen. D. Lep. pl. 74. f. 1. male.

Eumenia Toxea Guér. *op. cit.* pl. 80. f. 3. 3 a.

Cuba.

B. M.

Genus II. EPITOLA.

EPITOLA *Boisduval* MS.

BODY moderately robust; wings of the males of a splendid blue colour above, bronzy-coloured beneath.

HEAD as wide as the thorax, finely hairy.

Eyes large, naked.

Labial Palpi slender, much curved at the base, erect; the tip elevated rather higher than the top of the head, but extending only to a short distance in front of the face, clothed beneath with fine scaly hairs. Terminal joint slender, about one third of the length of the preceding joint.

Antennæ rather short, slender, terminated by a long, gradually formed, slender club; the joints very short, those of the club still shorter.

Fore Wings elongate, falcate at the tip. The costal margin much arched; apical angle truncate. Apical margin deeply emarginate. Costal vein not extending beyond the middle of the costa: postcostal emitting two branches before the anterior extremity of the discoidal cell, which extends considerably beyond; the postcostal vein is slightly angulated just beyond the second branch, and emits two short branches near the tip of the wing. Upper disco-cellular vein of considerable length, oblique: middle disco-cellular rather shorter than the upper, less oblique: lower disco-cellular very slender, transverse, about equal in length to the upper one; uniting with the third branch of the median vein at a moderate distance from its origin, closing the discoidal cell at a short distance before the middle of the wing.

Hind Wings subovate, entire, with the precostal vein obsolete. Postcostal vein arising near the body, branching at a moderate distance from the base. The upper and lower disco-cellular veins slender, oblique, forming a slight arch; the upper arising at a moderate distance beyond the base of the branch of the postcostal, and the lower one uniting with the third branch of the median vein rather beyond the middle of the distance between the first and second branches.

Fore Legs of the male slender, scaly. Tibia longer than the femur. Tarsus about two thirds of the length of the tibia, more slender, finely spined beneath, formed of a long single joint.

Hind Legs finely scaly, with the femur very short. Tibiæ longer, rather robust. Tarsus one third longer than the tibia, spiny beneath.

ABDOMEN slender.

The falcate shape of the fore wings, together with the perpendicular position of the palpi, the four branches of the postcostal veins (the last two arising close together near the tip of the wing), and the elongated tarsi of the hind legs, will at once generically distinguish the type of this very interesting genus from Phytala and the adjacent groups. The species is of great rarity, and is a native of Ashanti.

EPITOLA.

1. EPITOLA ELION.

Epitola Elion Boisduval MS.; Doubl. Westw. & Hewits.
Gen. D. Lep. pl. 68. f. 5.
 Ashanti. B. M.

Genus III. PHYTALA.

PHYTALA *Boisduval MS.*

General Characters of Epitola.

Labial Palpi nearly horizontal, the tips porrected to about the length of the head.

Fore Wings subtriangular, the apex subacute. The apical margin slightly concave. First branch of the postcostal vein uniting with the costal shortly beyond its origin, and thrown off near the tip of the costal, and extended to half the distance between the extremity of the costal and the tip of the wing: the other branches of the postcostal and the disco-cellular veins arranged as in *Epitola*.

Fore Legs of the male with the tibia swollen, and armed with two rows of fine short spines on the under side. Tarsus formed of a long single joint, gradually attenuated, and armed beneath in the same manner as the tibia.

Intermediate Legs with the tibiæ considerably longer than the femur (which has a small tubercle on the under side near the tip), considerably swollen, and armed with two rows of short spines on the under side. Tibial spurs very short, or obsolete. Tarsus shorter than the tibia: the basal joint nearly as thick as the extremity of the tibia, similarly armed on the under side; second and two following joints short, nearly square; fifth joint longer and slender. Ungues elongated, simple, curved and acute at the tip. Pulvillus broad and very short. Paronychialia very short, subtriangular, thin, leathery, and villose.

The type of this genus is, like that of the last-described, a native of Ashanti, agreeing also therewith in the form of the palpi, and in the possession of two short branches emitted near the tip of the postcostal vein of the fore wings. The form of the wings, the junction and subsequent separation of the first branch of the postcostal and the costal veins, the horizontal palpi, and the dilated legs at once separate it from *Epitola*. The under side of the typical species is of a silky-brown colour, with paler pearly transverse striæ; the fore wings, beyond the middle, being suffused with silvery bluish scales.

PHYTALA.

1. PHYTALA ELAIS.

Phytala Elais Boisduval MS.; Doubl. Westw. & Hewits.
Gen. D. Lep. pl. 77. f. 2.
 Ashanti. B. M.

Genus IV. OGYRIS.

OGYRIS *E. Doubleday, List Lep. B. M.* pt. ii.

BODY small, but rather robust : wings large, scalloped along the outer margins.

HEAD moderate-sized, finely hairy, scarcely tufted in front, or on the crown.

Labial Palpi porrected in front of the face to about the length of the head, and ascending obliquely to the level of the top of the eyes, slender, compressed, and narrowed, finely scaly ; the middle joint elongate, and nearly straight ; the terminal joint minute, oval, and nearly naked.

Antennæ rather short, slender ; terminated by an elongate, gradually formed, not very robust club, rather obliquely obtuse at the tip.

THORAX. *Fore Wings* large and wide, much arched along the costal margin, subacute at the apical angle. Apical margin scalloped, rather convex. Inner margin elongated. Costal vein short. Postcostal with two branches arising before the anterior extremity of the discoidal cell, slightly angulated at a short distance beyond the second branch, and emitting a third branch about half-way between the cell and the tip of the wing. Upper disco-cellular vein obsolete ; the upper discoidal vein arising conjointly with the middle disco-cellular at the slight angulation of the postcostal vein : middle disco-cellular vein transverse, of equal length with the lower one, which is also transverse, but together forming a slight curve : the lower one uniting with the third branch of the median vein at a moderate distance beyond its origin, this third branch being angulated at the place of junction.

Hind Wings broadly ovate, scalloped along the outer margin ; not tailed. Precostal vein obsolete. Costal vein extending to the outer angle of the wings. Postcostal vein branching at a moderate distance from the base. Upper disco-cellular vein arising at a rather considerable distance beyond the branch of the postcostal, very much arched, the inner part forming the base of the discoidal vein : lower disco-cellular very slender, straight, transverse, uniting with the third branch of the median vein at a short distance beyond its origin.

Fore Legs in both sexes clothed with very long scales. Femur hairy beneath. Tibia of the males as long as the femur, that of the female shorter. Fore tarsus in the male slender, consisting of a long single joint, finely spined beneath ; that of the female as long as the tibia, five-jointed, the joints spined at the tip beneath ; fifth joint longer than the preceding, with two short bent unguis.

Four Hind Legs moderately elongated, scaly. Tibial spurs short. Tarsi spined beneath, especially at the tips of the joints. Ungues porrected, but small, very much curved, simple, and acute at the tips. Pulvillus small, somewhat heart-shaped, thickened at the sides. Pseudonychia small, subtriangular, finely villose.

This genus consists of two Australian species of great rarity, distinguished by the dissimilarity in the sexes, and by the scalloped margins of the wings, as well as the strongly scaled fore legs. The postcostal vein of the fore wings has also only three branches, and the upper disco-cellular vein of the hind wings is very much arched. The insect figured in our Plate LXXV. is a female, the opposite sex, which was regarded by Mr. E. Doubleday as a distinct species (*O. Damo*), being smaller, and entirely of a bluish black colour on the upper side of the wings. The under side of the wings in both sexes is of an obscure dull greyish brown, with numerous irregular waved darker bands, each edged with a still darker line.

OGYRIS.

1. OGYRIS ABROTA.

Ogyris Abrota *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 20. ; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 75. f. 8. (female).
(Male) *Ogyris Damo* *E. Doubl. loc. cit.*
Hunter River, Port Stephen, Australia. B. M.

2. OGYRIS IDMO.

Ogyris Idmo *E. Doubleday, loc. cit.*
Swan River.

B. M.

Genus V. ANOPS.

ANOPS *Boisduval*.

PHÆDRA *Horsfield*.

BODY moderately robust: wings large, under side destitute of ocelli, and of a silky white colour; with slightly indicated, slender, oblique bars.

HEAD short, broad, hairy, with a short transverse tuft at the base of the antennæ.

Eyes finely hirsute.

Antennæ short, cylindrical, gradually thickened so as to form a long club (scarcely more than twice the thickness of the basal portion), obtuse at the tip, not ringed with white.

Labial Palpi obliquely porrected, moderately elongated, longer in the female than in the male; the tip elevated higher than the top of the eyes, and extending in front to about the length of the head; clothed with very fine closely adpressed scales. Terminal joint slender, about half the length of the preceding joint in the female, shorter in the male, nearly horizontal.

THORAX moderate-sized; tippets large.

Fore Wings oblong, the tip more acute in the males. Costal margin strongly arched at the base. Postcostal vein emitting three branches; the first and second considerably before the anterior extremity of the discoidal cell, the postcostal being slightly angulated at about the same distance beyond the second branch as exists between the first and second branches; the third branch arising at more than half the distance from the cell and the tip of the wing. Upper disco-cellular arising at the slight angulation of the postcostal vein, short, oblique: middle and lower disco-cellular veins transverse, very slender; the lower one uniting with the third branch of the median vein at about the same distance from its origin as exists between the first and second branches.

Hind Wings rounded, obtuse, with the anal angle more acute in the male. Costal vein extending to the outer angle of the wing. Postcostal vein arising near the body, branching at a moderate distance from the base. The upper and lower disco-cellular veins (closing the discoidal cell) very slender, transverse, and of equal length. Precostal vein obsolete.

Legs very short, thick, and densely clothed with party-coloured scales.

Fore Legs of the male rather longer and slenderer than those of the female. Tarsus consisting of a single elongate compressed joint, obtuse at the tip, with several fine spines beneath, and terminated by a single bent hook. *Fore Legs* of the female nearly as long and thick as the tibia, five-jointed; the first joint nearly as long as the rest conjoined; the three following very short; the fifth longer, oval; joints armed beneath with small spines. Ungues and pulvillus small.

Four Hind Legs very scaly. Tibial spurs short, but distinct. Middle femur elongated, with a small lobe on the under side beneath. Tibia with a corresponding incision. Tarsi with the basal joint elongate-ovate, occupying half the length of the tarsus; terminal joint obliquely truncate, broad. Ungues small, acute. Pulvillus broad, but short. Paronychia minute.

ABDOMEN small.

This interesting genus was first characterised (but with some omissions of importance) by Dr. Horsfield, who applied to it the generic name of Phædra, being that of the typical species which he altered to *Terricola*. Dr. Boisduval, rejecting this change as contrary to the canons of nomenclature, gave to the genus the name adopted above. The hirsute eyes, short, very gradually but slightly clavate antennæ, elongated palpi of the female, the arrangement of the wing-veins, and the formation of the fore tarsi are the chief structural characters of the genus; whilst the peculiar style of colouring of the wings (which are quite entire, and destitute of tails), and the absence of all traces of ocelli, will at once distinguish these insects from the other genera of the present family. The males have the ground colour of the wings on the upper side of a fiery copper hue, whilst in the females they are obscure white.

The species are natives of the East. They are either more numerous than has been supposed, or different individuals of both sexes are subject to considerable variation in the outline of the wings.

ANOPS.

1. ANOPS PHÆDRUS.

(Male) *Papilio Phædrus Fabricius, Mant. Ins. ii. p. 79.*

Boisduval, Sp. gén. Léop. i. t. 33. f. 1.; Godart, Enc. M. ix. p. 675.

Candalides Phædrus Hübner, Verz. bel. Schm. n. 720., Zutrage, f. 263, 264.

Phædra terricola Horsfield, Cat. Lep. p. 124.

Papilio Cinyra Cramer, Pap. f. 238. f. C.

(Female) *Papilio Thetys Drury, Ill. t. 9. f. 3, 4.; Cramer, pl. 238. f. D.*

Papilio Æsopus Fabricius, Mant. Ins. ii. p. 79.

Curetis Æsopus Hübner, Verz. n. 1070.

India.

B. M.

2. ANOPS INSULARIS.

Phædra insularis Horsfield, Cat. Lep. E. I. C. p. 125.

Java?

3. ANOPS BULIS.

Anops Bulis Boisd. MS.; Doubl. Westw. & Hewitts. Gen. D. Lep. pl. 75. f. 5. (male).

Upper India.

B. M.

Genus VI. LOXURA.

LOXURA *Horsfield.*MYRINA p. *Godt.*MARMESSUS p. *Hübner.*

BODY moderately robust, short: wings of a uniform pale colour beneath, destitute of ocelli; hind wings produced into a single very long tail.

HEAD small, short, hairy, with a small transverse tuft behind the eyes.

Eyes large, naked.

Antennæ very short, not more than one third of the length of the fore wings, slender, gradually thickened; forming a very indistinct and elongated club; the tip acute, not ringed with white.

Labial Palpi greatly elongated in both sexes, longer in the female, equal to half the length of the antennæ, compressed, slender, scaly, slightly obliquely porrected; the tip not elevated above the middle of the eyes; the terminal joint nearly horizontal, slightly curved, acute at the tip.

THORAX elongate-ovate, clothed with long fine hairs.

Fore Wings subtrigonal. Costal margin very strongly arched from the base to the tip; apical angle acute. Apical margin nearly straight; posterior angle subacute. Inner margin nearly straight. Costal vein reaching to the middle of the costa. Postcostal vein with only three branches; the first and second arising before the anterior extremity of the discoidal cell; the postcostal itself slightly angulated at about the same distance beyond the second branch as exists between the first and second branches; the third branch arising considerably beyond the middle space between the cell and the tip. Upper disco-cellular vein very short, oblique, arising at the angle of the postcostal vein: middle and lower disco-cellular veins very slender, transverse, equal in length, closing the discoidal cell at about the middle of the wing, the lower one uniting with the third branch of the median vein at a moderate distance beyond its origin.

Lower Wings elongate-triangular; the outer margin straight, entire; the third branch of the median vein extending at its extremity into a very long slender tail; the tip of the submedian vein extending into a moderately prominent lobe. Costal vein extending to the outer angle. Postcostal vein branching at a moderate distance from the base; the disco-cellular veins very slender, transverse, forming the short closed discoidal cell. The upper disco-cellular arising at a short distance beyond the branch of the postcostal; and the lower disco-cellular uniting with the median vein at the origin of the third branch.

Fore Legs nearly alike in size and general appearance in both sexes, scaly, short, those of the males with the tarsus two thirds of the length of the tibia, exarticulate, compressed, obtuse at the tip, finely scaly, armed beneath with minute spines, and terminated by a few small curved spines. The tarsus of the female five-jointed, depressed; the basal joint half the length of the tarsus; the second, third, and fourth joints very short; the fifth ovate, terminated by two minute ungues, with very small pulvillus and pseudonychia.

Four Hind Wings short, scaly. Femora hairy beneath, intermediate ones with a lobe beneath near the tip. Tibia of equal length with the femur, with a depression near the base. Tarsus equal to the tibia in length; basal joint half the length of the tarsus. Femur and tibia of the hind pair shorter than in the middle pair. Tarsus one third longer than the tibia; basal joint swollen, subovate, nearly equal in length to the entire tibia; terminal joints similar to those of the fore legs of the female, depressed. Ungues, pulvillus, and pseudonychia minute.

ABDOMEN small.

This genus has been united with the following by Godart, Boisduval, and E. Doubleday; but I agree with Dr. Horsfield in the propriety of its separation from the other Myrinae. The antennæ more evidently incrassated towards the point, with the terminal joints more distinctly bristly, the more elongated palpi, the prominent eyes, the more elongated hind wings extending into a single long tail, and the rather more elongated fore legs, are the chief characters upon which Dr. Horsfield relies. In addition to these characters, I find the legs in the typical species much more slender and shorter than in the types of Myrina; the basal joint of the hind tarsus greatly swollen in both sexes; the lower disco-cellular vein of the hind wings uniting with the median vein exactly at the origin of the third branch. Another subsidiary character consists in the almost complete identity in the general appearance and colours of the two sexes. In this latter respect it affords a striking difference from the species of Phædra and Myrina; agreeing, however, with the former in the general uniformity of its colours.

LOXURA.

1. LOX. ATYMNUS.

Papilio Atymnus Cramer, *Pap.* t. 331. f. D. E.; *Fabr. Mant. Ins.* II. p. 70. 283. (*Hesperia* A.); *Donovan, Ins. China*, pl. 39. f. 1.; *Horsfield, Cat. Lep. E. I. C.* p. 121. pl. 11. f. 6. 6 a—d.; *Godart, Enc. M.* IX. p. 594.; *Boisduval, Sp. gén. Léop.* I. pl. 7. f. 3.; *Hübner, Verz. bck. Schm.* n. 828. (*Marmessus* A.).
India, Java, Ceylon. B. M.

2. LOX. PITA.

Loxura Pita *Horsfield, Cat. Lep. E. I. C.* p. 122.; *Doubl. Westw. & Hewits, Gen. D. Lep.* pl. 74. f. 2.
Silhet, Java. B. M.

Genus VII. MYRINA.

MYRINA *God., Horsfield.*

BODY moderately robust; hind wings generally extended into one or more long slender tails.

HEAD small, obtuse; clothed, especially on the crown, with fine long hairs.

Eyes naked.

Antennæ of moderate length, slender, gradually thickened almost from the base; the club long, cylindrical, not ringed with white, the extremity rather acute and slightly bent, at least one third of the length of the antennæ.

Labial Palpi very long and compressed, slender, slightly divergent; the middle joint elongated, oblong, extending forwards considerably beyond the front of the head, slightly oblique, the tip not higher than the middle of the eyes; the third joint very slender, cylindrical, and horizontal, finely squamose; longer in the female than in the male.

Fore Wings subtrigonal obtuse. Costal margin moderately arched; apical angle subacute. Apical margin straight, or but slightly convex. Veins arranged as in *Loxura*, except that in some species (*M. Ravindra* and *Etolus*) the postcostal vein of the fore wings is destitute of the third branch near their extremity.*

Hind Wings elongate, subtrigonal. The anal region extending longitudinally, and transversely truncated from the submedian to the middle branch of the median vein; the former extending at the anal angle into a short appendage; and the first, and often the second, branches of the median vein extend into long slender tails. Upper disco-cellular vein arising at about the distance of its own length from the origin of the branch of the postcostal vein. The lower disco-cellular vein uniting with the third branch of the median vein at a short distance from its origin.

Fore Legs of the male slender, clothed with scaly hairs. Femur with longer hairs beneath. Tibia as long as the femur. Tarsus two thirds of the length of the tibia, slender, exarticulate, and subcylindrical, with several fine short spines beneath; obtuse at the tip, which is armed with several very short stiff bristles. *Fore Legs* of the female rather shorter and thicker than those of the male, scaly. Tarsus with the basal joint nearly as long as the rest conjoined. Three intermediate joints of nearly equal length; fifth joint small, ovate; joints armed beneath with fine short bristles.

Four Hind Legs nearly identical in structure, the middle femora being longer than their tibiae, whilst the hinder tibiae are rather longer than their corresponding femora. Tibial spurs short but distinct. Tarsi identical in structure with those of the fore legs of the female, except that they are comparatively considerably longer. Ungues minute.

ABDOMEN small, acute.

* Dr. Boisduval's figure of the veins of *M. Ravindra* is incorrect in this respect.

The species of this genus are amongst the most curious in the family, the majority being distinguished by the long and very narrow tails of the hind wings, long porrected palpi, and gradually thickened antennæ. *M. Jafra* may be regarded as one of the best-marked types; the tail at the extremity of the first branch of the median vein of the hind wings being more than an inch long, and the wing itself not being quite that length. There is considerable difference, however, in the extent and number of these tails, as well as in the length of the palpi; and, indeed, until the transformations of some at least of the leading types are ascertained, it will be impossible to determine the limits of this genus and *Amblypodia*. *M. Alcides* has only one broad tail to the hind wings. *M. Sugriva* has also one, long and narrow; but the anal angle forms an additional lobe or appendage. In *M. Etolus* each hind wing has two slender tails of unequal length, the anal angle not being lobed; whilst *M. Ravindra* has three distinct tails, the middle one being the longest, and that at the anal angle as long and slender as that at the extremity of the middle branch of the median vein. Unfortunately we are unacquainted with the transformations of a single species of the genus, which, in the following list, includes several of Dr. Horsfield's *Amblypodia*, which seem, from their general habit, to approach nearer to the typical *Myrina*. The typical species are not distinguished by metallic blue tints on the upper surface of the wings, so common in the *Amblypodia* and *Thecla*. The opposite sexes of *M. Ravindra* differ, however, in this respect; the males having the hind wings of a rich blue colour on the upper side. The species are for the most part natives of the East.

MYRINA.

1. MYR. JAFRA.
Myrina Jafra Godart, *Enc. M.* ix. p. 593.; *Horsfield, Cat. Lep. E. I. C.* p. 118. t. 2. f. 5. 5 a.; *Lucas, Hist. Nat. Lep. Ex.* pl. 43. f. 4.
India. B. M.
2. MYR. SUGRIVA.
Amblypodia Sugriva Horsfield, *Cat. Lep. E. I. C.* p. 105. pl. 1. f. 10. 10 a.
India. B. M.
3. MYR. LISIAS.
Hesperia Lisias Fabricius, *Mant. Ins.* ii. p. 65. 261.; *Godart, Enc. M.* ix. p. 593.; *Boisduval, Sp. gén. Lép.* i. t. 22. f. 2.
India. (Type in Mus. Banks.) B. M.
4. MYR. AMOR.
Papilio Amor Fabricius, *Mant. Ins.* ii. p. 65.; *Herbst, Pap.* t. 302. f. 9, 10.; *Godart, Enc. M.* ix. p. 620.; *Guérin, Icon. R. An. Ins.* pl. 81. f. 6.
Papilio Triopas Cram. pl. 320. f. G, H.
East India, Coromandel.
5. MYR. RAVINDRA.
Myrina Ravindra Horsfield, *Cat. Lep. E. I. C.* p. 117. t. 1. f. 11. 11 a.
Java. B. M.
6. MYR. CHITRA.
Thecla Chitra Horsfield, *Cat. Lep. E. I. C.* p. 97. t. 1. f. 5.
Java. B. M.
7. MYR. NEDYMOND.
Papilio Nedymond Cramer, *Pap.* t. 299. f. E. F.; *Horsf. Cat. Lep. E. I. C.* p. 96. (not of Godart, *Enc. M.*).
Java. B. M.
8. MYR. THYMBRÆUS.
Sithon Thymbræus Hübner, *Zutr.* f. 671, 672.
East India.
9. MYR. ETOLUS.
Hesperia Etolus Fabricius, *Mant. Ins.* ii. p. 66.; *Godart, Enc. M.* ix. p. 639.; *Horsfield, Cat. Lep. E. I. C.* p. 115.
India, Java. B. M.
10. MYR. HESIODUS.
Hesperia Hesiodus Fabricius, *Ent. Syst.* iii. pt. 1. p. 260.; *Godart, Enc. M.* ix. p. 618. (*Polyomm. H.*).
India.
11. MYR. DINDUS.
Hesperia Dindus Fabricius, *Ent. Syst.* iii. pt. 1. p. 269.; *Godart, Enc. M.* ix. p. 639.
India.
12. MYR. THARIS.
Oxylides Tharis Hübner, *Zutr.* f. 883, 884.
Myrina Pharis E. Doubleday, *List Lep. Brit. Mus.* ii. p. 22.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 74. f. 3.
Java, India. B. M.
13. MYR. FREJA.
Hesperia Freja Fabricius, *Ent. Syst.* iii. pt. 1. p. 263. 19.
Tranquebar.
14. MYR. ERYLUS.
Polyommatus Erylus Godart, *Enc. M.* ix. p. 633.; *Horsf. Cat. Lep. E. I. C.* p. 111.
India, Java. B. M.
15. MYR. AMYNTOR.
Papilio Amyntor Herbst, t. 300. f. 5, 6.
Northern India. B. M.
16. MYR. ALCIDES.
Papilio Alcides Cramer, *Pap.* t. 96. f. D. E.; *Fabricius, Mant. Ins.* ii. p. 70.; *Godart, Enc. M.* ix. p. 594.
Papilio Silenus Fabricius, *Mant. Ins.* ii. p. 85.; *Donovan's Drawings in Bibl. Hope, Oxford.*
(Var.) *Papilio Corax* Cramer, *Pap.* pl. 379. f. D. E.
Guinea. (Type in Mus. Banks.) B. M.
17. MYR. PHOCIDES.
Hesperia Phocides Fabricius, *Ent. Syst.* iii. pt. 1. p. 282.; *Donovan, Nat. Repos.* ii. pl. 44. f. 1.
Africa.
18. MYR. ———.
Angas Illustr. of South Africa, pl. of Lep. f. 9.
Zoolu, South Africa. B. M.

Genus VIII. AMBLYPODIA.

AMBLYPODIA *Horsfield, E. Doubleday.*
 ARHOPALA *Boisduval, Blanchard.*
 DIPSAE *E. Doubleday.*

BODY robust: wings large, generally banded beneath; hinder pair tailed.

HEAD moderate size, clothed with scale-like hairs forming a slight conical tuft on the crown.

Eyes large, circular, naked.

Labial Palpi of moderate length, obliquely porrected, extending in front about the length of the head: the terminal joint horizontal, and not elevated more than half the height of the eyes. Basal joint short; second joint much more elongated, rather slender, bent at the base, thickly clothed with adpressed scales; terminal joint varying from nearly half to about one third of the length of the middle joint, slender, finely scaly, attenuated towards the tip, which is obtuse, and being rather longer in the females than in the males.

Antennæ short, not more than two fifths of the length of the fore wings, slender, gradually but slightly increasing in thickness from the base so as to form a long slight club, of which the knob is not distinct; joints short, not ringed with white; the tip rather obtuse.

THORAX robust, thickly clothed above with scales, and at the sides with hairs.

Fore Wings large, subtriangular. Costal margin very much arched, especially near the base; apical angle subacute. Apical margin generally straight, or but slightly convex. Costal vein not extending half the length of the costa. Postcostal at a considerable distance from the costa, with two branches arising before the anterior extremity of the discoidal cell; the vein itself slightly angulated at about the same distance beyond the origin of the second branch, as exists between the first and second branches; a third branch arises at a greater or less distance beyond the discoidal cell, the extremity of the postcostal running to the tip of the wing; sometimes this third branch is very short, and arises much nearer to the tip of the wing than to the extremity of the discoidal cell; and in a few instances a fourth branch exists very near to the tip of the wing. The upper disco-cellular vein varies in its position according to the greater or less extent of the discoidal cell: where the latter is more or less truncate it is very short, and more or less transverse; but where the extremity of the cell is of a more oval form it is longer and more oblique. The middle disco-cellular vein is short, much less oblique or more transverse; and the lower disco-cellular is rather longer than the middle one (both being slender), and united with the third branch of the median vein at a moderate distance beyond its origin.

Hind Wings large, rounded, or broadly ovate, the hinder margin generally produced at the extremity of the first branch of the median vein into a tail of greater or less length; the extremity of the second branch of the median vein, and sometimes also the end of the submedian vein, being angulated or produced into slender tails; the tail of the submedian vein in some species being even longer than that of the first branch of the median, the anal angle itself being produced into a more or less prominent lobe. The postcostal is branched at a moderate distance from the base of the discoidal cell, and is closed by the two disco-cellular veins, which are very delicate; the inner one uniting with the third branch of the median vein at a short distance from its origin.

Fore Legs slender, nearly alike in size and also in general appearance in both sexes previously to their being denuded of scales; about two thirds of the length of the hind legs: those of the male having the tarsus formed of a single long joint, compressed, truncated at the tip, with a few very short bristles; those of the female distinctly five-jointed, the joints armed beneath with strong spines at the tips, and the extremity furnished with a pair of small slender unguis and a moderate-sized pulvillus.

Four Hind Legs short, slender, scaly. The two tibial spurs strong and acute. Basal joint of the tarsus as long as all the rest. Unguis and pulvillus short.

CATERPILLAR elongate-ovate, depresso-scutate, sometimes widened and rugose towards the head.

CHRYSAEIS short, thick, entire or slightly rugose; head-piece rounded.

I have endeavoured to retain together in the present genus a number of species, amongst which are some of the largest and finest in the family, and all of which are natives of the Old World, and chiefly of Asia and the adjacent islands. The naked eyes, scaly palpi, antennæ composed of very short joints, destitute of white rings, and especially peculiar in being destitute of a regular knob, terminating instead in a long gradually formed club, are the chief characteristics. The types of the genus are the large Indian Amb.

Centaurus, *Apidanus*, *Helus*, *Anthelus*, &c., which are generally of a blue colour above with a black margin broadest in the females; *A. Eumolpus* has, however, the wings of a golden green colour. All these have the upper disco-cellular vein of the fore wings distinct, and the hind wings have only one elongated tail at the extremity of the first branch of the median vein. Other species differ in the number and position of the tails; *A. Longinus* and its allies having two, the longest being at the extremity of the submedian vein. In these the caterpillar and the chrysalis have the surface of the body more irregular. I have added to the genus various species united by Mr. E. Doubleday with *Aphnaeus*, remarkable for the golden markings of the under side of the wings, as they agree with the *Amblypodia* in the eyes, palpi, and antennæ; and with *A. Longinus*, &c., in the tails of the hind wings, in which respect they differ from *A. Isocrates*, &c., whilst their want of an upper disco-cellular vein in the fore wings (the upper discoidal vein arising from the postcostal at a short distance *beyond* the discoidal cell) separates them from the typical *Amblypodia*, and leads them towards *A. Isocrates*, &c., which they resemble in general form.

AMBLYPODIA.

1. *AMB. CENTAURUS* *Fabricius, Mant. Ins.* ii. p. 68. (*Hesperia* C.); *Godart, Enc. M.* ix. p. 658. (nec *Horsfield*).
North Australia. B. M.
2. *AMB. PSEUDO-CENTAURUS* *E. Doubl. List Lep. Brit. Mus.* pt. 2. p. 24.
Ambl. Centaurus Horsfield, Cat. Lep. E. I. C. p. 102. (nec *Fabr.*).
India, Java, Ceylon. B. M.
3. *AMB. APIDANUS* *Fabricius, Mant. Ins.* ii. p. 69. (*Hesperia* A.); *Cramer, Pap.* t. 137. f. F. G.; *Horsfield, Cat. Lep. E. I. C.* p. 100.
Papilio Dorimond Stoll, Suppl. Cram. t. 37. f. 4. 4 D.
Java. B. M.
4. *AMB. HELUS* *Cramer, Pap.* pl. 201. f. F. G. (*Papilio* H.); *Godart, Enc. M.* ix. p. 652.; *Horsfield, Cat. Lep. E. I. C.* p. 103.; *Lucas, Hist. Nat. Lep. exot.* pl. 44. f. 4.
East Indies.
5. *AMB. ANTHELUS* *Boisduval MS.; Doubl. Westw. & Hewitts. Gen. D. Lep.* pl. 74. f. 6.
Moulmein, East Indies.
6. *AMB. RAMA* *Kollar in Hugel's Reise d. Kaschmir, &c. Entomol.* p. 412. t. 4. f. 1, 2. (*Thecla* R.).
Mussooree, Himalaya.
7. *AMB. CEPHALUS* *Weber, Obs. Ent.* p. 109. (*Hesperia* C.).
East Indies.
8. *AMB. EUMOLPHUS* *Cramer, Pap.* t. 299. f. G. H. (*Papilio* E.); *Godart, Enc. M.* ix. p. 652.; *Horsfield, Cat. Lep. E. I. C.* p. 103.
India, Java. B. M.
9. *AMB. NARADA* *Horsfield, Cat. Lep. E. I. C.* p. 98. pl. 1. f. 8.
Java. B. M.
10. *AMB. VIVARNA* *Horsfield, Cat. Lep. E. I. C.* p. 99.
Java.
11. *AMB. MICALE* *Boisduval MS. (Arhopala M.); Hombron et Jacquenot, Voy. Pole Sud, Léop.* pl. 3. f. 11, 12.
New Guinea.
12. *AMB. PHRYXUS* *Boisduval, Voy. de l'Astrolabe, Entomol.* pt. 1. p. 75. (*Arhopala* P.).
New Guinea.
13. *AMB. MEANDER* *Boisduval, Voy. de l'Astrolabe, Entomol.* pt. 1. p. 67. (*Arhopala* M.).
Offack, Papua.
14. *AMB. CLEOBIS* *Godart, Enc. M.* ix. p. 634. (*Polyommatus* C.).
Bengal.
15. *AMB. CIPPUS* *Fabricius, Ent. Syst.* v., *Suppl.* p. 429. (*Hesperia* C.); *Godart, Enc. M.* ix. p. 634.
East Indies.
16. *AMB. LONGINUS* *Fabricius, Ent. Syst.* v. p. 430. (*Hesperia* L.); *Godart, Enc. M.* ix. p. 634.; *Hübner, Zutrage*, f. 933, 934. (*Bithys* L.); *Horsfield, Cat. Lep. E. I. C.* pl. 1. f. 7.; *Lucas, Lep. exot.* pl. 44. f. 3.
India. B. M.
17. *AMB. PSEUDO-LONGINUS* *E. Doubl. List Lep. B. M.* p. 23.
Amb. Longinus Horsfield, Cat. Lep. E. I. C. p. 110.
Java. B. M.
18. *AMB. VIDURA* *Horsfield, Cat. Lep. E. I. C.* p. 113. t. 1. f. 6. 6 a.
India, Java. B. M.
19. *AMB. LOHITA* *Horsfield, Cat. Lep. E. I. C.* p. 106.
Java, India.
20. *AMB. SYMA* *Horsfield, Cat. Lep. E. I. C.* p. 107.
Java, India.
21. *AMB. JALINDRA* *Horsfield, Cat. Lep. E. I. C.* p. 110.
Polyommatus Nedymond Godart, Enc. M. ix. p. 634. (not of *Cramer*).
India.
22. *AMB. JANGALA* *Horsfield, Cat. Lep. E. I. C.* p. 113.
Java.
23. *AMB. TIMOLEON* *Stoll, Suppl. Cramer, Pap.* pl. 32. f. 44. (*Papilio* T.); *Boisduval, Sp. gén. Léop.* t. 22. f. 4.
Amblypodia Rochana Horsfield, Cat. Lep. E. I. C. p. 108.
Thecla Nila Kollar in Hugel's Reise n. Kaschmir, Lep. pl. 4. f. 5, 6. (not *Lyc. Nila Horsf.*).
(An *Hesp. Mæneas Fabr.?*)
Northern India, Java. B. M.
24. *AMB. MÆNEAS* *Fabricius, Ent. Syst.* iii. pt. 1. p. 271. (*Hesperia* M.); *Godart, Enc. M.* ix. p. 639.; *Donovan, Ins. China*, pl. 39. f. 2.
China.
25. *AMB. LIGER* *Fabricius, Spec. Ins. App.* n. 504. (*Hesperia* L.); *Cramer, Pap.* t. 254. f. E. F.; *Godart, Enc. M.* ix. p. 622.
Hesperia Hymen Fabricius, Mant. Ins. ii. p. 65.
Sierra Leone. (Type in Mus. Banks.) B. M.

26. **AMB. PINDARUS** *Fabricius, Ent. Syst.* III. pt. 1. p. 262. (*Hesperia* P.); *Donovan, Ins. India*, pl. 38. f. 2.
Zerites *Brahmina Boisd. MS.*
India. B. M.
27. **AMB. VULCANUS** *Fabricius, Mant. Ins.* II. p. 66. (*Papilio* V.); *Hübner, Samml. ex. Schm.* Bd. 1. pl. —; *Godart, Enc. M.* IX. p. 644.; *Horsfield, Cat. Lep. E. I. C.* p. 106.; *Donovan, Ins. Ind.* pl. 38. f. 3.
(Female) *Pap. Etolus Cramer, Pap.* t. 208. f. E. F.
Java, India. B. M.
28. **AMB. NATALENSIS** *E. Doubl. List Lep. B. M.* pt. 2. p. 26. (*Aphnæus* N.); *Doubleday, Westw. & Hewits. Gen. D. Lep.* pl. 75. f. 4.
Port Natal. B. M.
29. **AMB. PERION** *Fabricius, Mant. Ins.* II. p. 68. (*Papilio* P.); *Cramer, Pap.* pl. 379. f. B. C.; *Godart, Enc. M.* IX. p. 645.
Surinam.
30. **AMB. HARPAX** *Fabricius, Mant. Ins.* II. p. 67. (*Papilio* H.); *Godart, Enc. M.* IX. p. 645.
America (*Fabricius*).
31. **AMB. ORCAS** *Drury, Ill.* III. pl. 34. f. 2, 3. (*Papilio* O.); *Godart, Enc. M.* IX. p. 645.
Sierra Leone.
32. **AMB. AURIFER** *Hombron et Jacquenot, Voy. Pole Sud, Lep.* pl. 3. f. 13, 14. (*Thecla* A.).
Van Diemen's Land.

Genus IX. DIPSAS.

DIPSAS *E. Doubleday*,
APHNÆUS *p. E. Doubleday*.
SITHON *Hübner*.

General characters of Amblypodia.

Eyes hairy.

Labial Palpi scaly or hairy: terminal joint in the female rather longer and slenderer than in the males.

Antennæ gradually clavate, the club rather more distinct than in the preceding genus; joints of moderate length, partly ringed with white.

Fore Wings with the postcostal vein emitting three branches; the third considerably beyond the discoidal cell. Upper disco-cellular vein obsolete. The upper discoidal vein arising from the postcostal beyond the discoidal cell; the lower disco-cellular vein almost obsolete.

Hind Wings with only one tail, arising at the extremity of the first branch of the median vein. The anal lobe in some species (*D. Ataxus*) scarcely distinct, in others produced and rounded (*D. Isocrates*). Upper disco-cellular vein arising at a greater or less distance from the origin of the branch of the postcostal vein.

Fore Legs of the male as long as those of the female, with the thighs in *D. Ataxus* outwardly clothed with long fine hairs. Tarsus composed of a single joint, truncate at the tip in *D. Ataxus*, and with a single deflexed spine; in *D. Isocrates* more attenuated, and curved at the tip, which is terminated by a horny oblique point.

CATERPILLAR of *D. Xenophon* elongate-ovate, depresso-scutate, and furnished with transverse rows of small fascicles of short hairs.

CHRYsalis smooth, short.

The type of this genus (*Th. Syla Kollar, D. Pholus E. D.*) is an Indian insect which has a general resemblance to the types of *Amblypodia*, the male being golden green on the upper surface of the wings, with a black margin (thus resembling *Amb. Eumolpus* which may possibly be congeneric), whilst the female (*Amb. ? Euphranor E. D.*) has the disc of the fore wings blue, with a white spot beyond the middle, and a broad dark brown margin. From the typical *Amblypodia* they are at once distinguished by the hairy eyes and palpi, and the want of an upper disco-cellular vein in the fore wings. The latter character, together with the hairy eyes, also separate *D. Isocrates*, *Xenophon*, &c., from the *Amblypodia* (with the double-tailed golden-marked species of which genus they are united by Mr. E. Doubleday into the genus *Aphnæus*). Dr. Horsfield had, however, properly separated them, most probably influenced by the fasciculated character of the larvæ. The natural history of *D. Isocrates*, the transformations of which are passed within the hollowed fruit of the pomegranate, has been above referred to. The species are natives of the East.

March 1. 1852.

DIPSAS.

1. DIPSAS SILA Kollar in *Hugel's Reise d. Kaschmir*, p. 414, pl. 4. f. 7, 8. (Thecla S.).
Dipsas Phelus Boisdual MS.; E. Doubleday, *List Lep. Brit. Mus.* pt. 2. p. 25. (male).
Amblypodia Euphranor E. Doubleday, l. c. (female).
(An Th. Phorbas Fabr.?)
Himalaya, Simla, Northern India. B. M.
2. DIPSAS ATAXUS Boisdual MS. (Thecla A.); *Doubl. List Lep. Brit. Mus.* pt. 2. p. 25. (Dipsas A.); *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 74. f. 7.
Simla. B. M.
3. DIPSAS XENOPHON Fabricius, *Ent. Syst.* III. pt. 1. p. 272. (Hesperia X.); Godart, *Enc. M.* IX. p. 640.; Donovan, *Ins. Ind.* pl. 41. f. 3.; Horsfield, *Cat. Lep. E. I. C.* p. 94. pl. 4. f. 2. 2 a.
Java. B. M.
4. DIPSAS ISOCRATES Fabricius, *Ent. Syst.* III. pt. 1. p. 266. (Hesperia I.); Godart, *Enc. M.* IX. p. 633.; Westwood in *Trans. Ent. Soc.* II. t. 1., and Donovan, *Ind.* 2d edit. l. c. subtus; Downes in *Calcutta, Jl. Nat. Hist.* II. p. 408.
Papilio Pann. Fabricius, *Ent. Syst.* III. pt. 1. p. 276.; Donovan, *Ins. Ind.* pl. 38. f. 1. (not of Drury).
Thecla Nissa Kollar in *Hugel's Reise d. Kaschmir*, p. 412. t. 4. f. 3, 4. (male).
India. B. M.
5. DIPSAS JARBAS Fabricius, *Mant. Ins.* II. p. 68. (Hesperia J.); Godart, *Enc. M.* IX. p. 646.; Horsfield, *Cat. Lep. E. I. C.* p. 93.; Donovan, *Ins. Ind.* pl. 40. f. 3.
Papilio Melampus Cramer, *Pap.* pl. 362. f. G. H.
Thecla Sorya Kollar in *Reise d. Kaschmir*, t. 5. f. 1, 2.
Java, India. B. M.
6. DIPSAS PHORBAS Fabricius, *Ent. Syst.* III. pt. 1. p. 277. (Hesperia P.); Godart, *Enc. M.* IX. p. 646.; Donovan, *Ins. Ind.* pl. 41. f. 5.
India.
7. DIPSAS LIVIA Klug & Ehrenberg, *Symbolæ Phys.* pl. 40. f. 3—6.
Asia Minor, Arabia Felix.
8. DIPSAS NASAKA Horsfield, *Cat. Lep. E. I. C.* p. 91. (Thecla N.).
Java.
9. DIPSAS VARUNA Horsfield, *Cat. Lep. E. I. C.* p. 91. (Thecla V.).
Java.
10. DIPSAS KESSUMA Horsfield, *Cat. Lep. E. I. C.* p. 89. (Thecla K.).
Java.
11. DIPSAS MALIKA Horsfield, *Cat. Lep. E. I. C.* p. 90. (Thecla M.).
Java.

Genus X. IOLAUS.

IOLAUS and ANTHENE p. E. Doubleday.
IOLAUS and OXYLIDES Hübner.

General characters of Thecla.

Labial Palpi scaly; middle joint varying in length and breadth; terminal joint long and slender.

Antennæ with the joints varying in length, and more or less ringed with white; with the club distinct, but gradually formed.

Eyes naked.

Fore Wings subtriangular, moderately rounded on the costal margin. Postcostal vein with only two branches before the extremity of the discoidal cell, beyond which the extremity extends to the tip of the wing. Upper disco-cellular vein short, oblique; the middle and lower ones very slender, transverse.

Hind Wings considerably elongated, with three tails, varying in length, but sometimes very long; the inner one, into which the extremity of the submedian vein extends, being generally the longest. The inner edge of the discoidal cell terminating at the origin of the third branch of the median vein.

The scarcity of the African species, of which this group is composed, prevents me from giving so well defined a character to the genus as I could have wished. It appears closely allied to *Myrina* in habit, and there is considerable diversity in the length of the joints of the slender portion of the antennæ; and, in those species (*I. Antifaunus*, &c.) which have these joints longest, they are more

distinctly ringed with white, and the club is somewhat more distinct. In *I. Helius* the joints are much shorter, and scarcely ringed, and the club is more gradually formed; the labial palpi in this species are also narrower than in the preceding named insect. I have added *P. Larydas* and *Pythagoras* to the genus on account of their possessing three tails, differing in this respect from the other species of *Anthene*, which appear to me to be more properly referable to the genus *Thecla*. The insect figured in Plate LXXIV. under the name of *Anops Silas* belongs to this group, being nearly allied to *Iol. Helius*.

IOLAUS.

- | | |
|--|---|
| <p>1. <i>IOL. ANTIFAUNUS</i> <i>Boisduval MS.</i> (<i>Thecla A.</i>); <i>E. Doubleday, List Lep. Brit. Mus.</i> pt. 2. p. 27. (<i>Iolaus A.</i>); <i>Doubl. Westw. & Hewits. Gen. D. Lep.</i> pl. 75. f. 1.
Sierra Leone, Ashanti. B. M.</p> <p>2. <i>IOL. FAUNUS</i> <i>Drury, Ill. II. t. 1. f. 4, 5.</i> (<i>Papilio F.</i>); <i>Cramer, Pap. t. 39. B. C. t. 96. f. F. G.</i>; <i>Fabricius, Mant. Ins. II. p. 65.</i>; <i>Godart, Enc. M. IX. p. 618.</i>
Sierra Leone. B. M.</p> <p>3. <i>IOL. GALATHEA</i> <i>Swainson, Ill. 1st series, t. 69.</i> (<i>Thecla G.</i>).
Western Africa. B. M.</p> <p>4. <i>IOL. HELIUS</i> <i>Fabricius, Mant. Ins. II. p. 65.</i> (<i>Hesperia H.</i>); <i>Godart, Enc. M. IX. p. 618.</i>
<i>Papilio Eurisus Cramer, Pap. t. 221. f. D. E.</i>
Sierra Leone, Ashanti. B. M. and Mus. Banks. (type).</p> <p>5. <i>IOL. SILAS</i> * <i>Westw. MS.</i>; <i>Doubl. Westw. & Hewits. Gen. D. Lep.</i> pl. 74. f. 5. (<i>Anops S.</i>).
South Africa, Amazouliv B. M.</p> | <p>6. <i>IOL. ISMENIAS</i> <i>Klug & Ehrenberg, Symbolæ Phys.</i> pl. 40. f. 1, 2.
Ambukohl.</p> <p>7. <i>IOL. ? TIMON</i> <i>Fabricius, Mant. Ins. II. p. 65.</i> (<i>Papilio T.</i>); <i>Godart, Enc. M. IX. p. 620.</i>; <i>Donovan, Nat. Repos. III. pl. 97.</i>
South America? (<i>Fabricius</i>).</p> <p>8. <i>IOL. LARYDAS</i> <i>Cramer, Pap. t. 282. f. H.</i> (<i>Papilio L.</i>); <i>Godart, Enc. M. IX. p. 619.</i>
<i>Hesperia Pericles Fabricius, Ent. Syst. III. pt. 1. p. 273.</i>
Sierra Leone, Western Africa. B. M.</p> <p>9. <i>IOL. SYLVANUS</i> <i>Drury, Ill. II. t. 3. f. 2, 3.</i> (<i>Papilio S.</i>).
Sierra Leone. B. M.</p> <p>10. <i>IOL. PYTHAGORAS</i> <i>Fabricius, Ent. Syst. III. pt. 1. p. 259.</i> (<i>Hesperia P.</i>); <i>Donovan, Ins. Ind. pl. 39. f. 3.</i>; <i>Godart, Enc. M. IX. p. 619.</i>
<i>Papilio Juba Fabricius, Mant. Ins. II. p. 82.</i>
Sierra Leone. B. M.?</p> |
|--|---|

Genus XI. THECLA.

THECLA Fabricius.
POLYOMMATUS p. Godt.

BODY robust: wings (of the male) at least generally more or less coloured with purple or blue; hind wings with the extremity of the submedian vein not prolonged into a tail.

HEAD short, transverse; face flattened, scaly; crown rougher, with scaly hairs.

Antennæ short, rarely half the length of the fore wings, straight; the extremity forming an elongated, more or less thickened, and more or less gradually formed club; the joints preceding the club varying in length according to the greater thickness of the club.

Labial Palpi short, or but moderately elongated, varying in their direction, being sometimes obliquely porrected, and sometimes with the extremity horizontal; variable also in their clothing, being often covered with closely adpressed scales, but in other species with the middle joint bristly beneath. Terminal joint slender, and generally short, but in the females of some species (e. g. *Th. Phaleros*, *Marsyas*) as long as the second joint, slender, and cylindrical; in other species (e. g. *Th. Betulæ*, &c.) very short, and alike in both sexes.

Eyes almost always finely hairy.

THORAX generally robust, and clothed with soft hairs.

Fore Wings large, subtriangular, often marked in the males with a rounded velvet-like patch about the extremity

* *I. alis supra cæruleis, anticis disco pallidiori costa limboque lato nigris, posticis margine postico testaceo; alis infra albis, posticis linea tenui rufescenti in angulum analem nigrum terminata, linea parva nigra angulata interrupta supra angulum analem.*

of the discoidal cell, which causes a slight derangement in the position of the veins in that part, as contrasted with the arrangement in the females (as in *Th. Rubi*). In the great majority of the species the postcostal vein has only two branches preceding the anterior extremity of the discoidal cell, the terminal portion of the vein extending to the tip of the wing, furnished, however, in a very few species (*Th. Betulæ*, *Quercus*), with a short third branch beyond the middle space between the cell and the tip of the wing. The upper disco-cellular vein is generally absent, the middle one arising at the place of junction of the upper discoidal and postcostal veins; in a few species, however, the upper discoidal leaves the postcostal at a short distance beyond the cell (*Th. Quercus*, *Acmon* ♂). In *Th. Rubi*, male, the postcostal is suddenly deflexed after emitting its second branch, and the upper disco-cellular, which is considerably elongated and bent, arises almost close beyond the second branch; whilst in the female of the same species these veins are arranged simply and without any upper disco-cellular; the lower disco-cellular vein always joins the third branch of the median at a short distance beyond its origin.

Hind Wings generally elongated, with rounded margins or narrower towards the anal extremity, slightly sinuated; the first (and in a comparatively small number of species the second) branch of the median vein being produced into a very slender tail; the submedian vein terminating in a more or less distinct lobe, which is sometimes (e. g. *Th. Quercus*) obsolete. Discoidal cell closed by very slender disco-cellular veins.

Fore Feet of the males furnished with a short tarsus externally nearly resembling that of the female, but which, when denuded, is found to consist of a single exarticulate joint, furnished beneath with short spines arranged in more or less distinct rows, and terminated by a single horny obliquely curved point. Tarsus of the female articulated, clothed with scales, and armed with spines at the extremity of the joints. The unguis short and strongly curved, accompanied by two short filiform pseudonychia and a pulvillus, the whole covered and nearly concealed by numerous short villi.

Four Hind Legs longer, with similarly formed tarsi.

CATERPILLAR short, onisciform, thick or linear-oblong and depressed, and attenuated at each end; generally clothed with very fine short hairs.

CHRYSLIS short and smooth, head rounded; attached by the pointed tail, and girt across the middle.

The great number of species of which the present genus is composed has rendered it very difficult to draw up characters sufficiently precise to distinguish it from the allied genera. The difficulty has also been greatly increased, especially with respect to the location of the species, by the circumstance that the minute details which I have thought necessary to investigate (such as the length of the joints of the antennæ, the relative thickness of the club, the clothing of the palpi, and the arrangement of the veins of the wings) have not been attended to by the describers and figurers of the species, so that without specimens of many of them, it has been only by analogy that I have been able to arrange them in the following list, or to characterise them generically.

As here restricted, the genus is composed almost entirely of species natives of South and North America (chiefly the former) and Europe. Amongst the Brazilian species are some of the largest and most brilliant species of the family, such as *Th. Marsyas*, *Gabriela*, *Endymion*, and *regalis*. These are followed by other Brazilian species of somewhat smaller size, but of exquisite beauty, the males in the majority of which are distinguished by a curious satin or plush-like patch on the fore wings at the extremity of the discoidal cell. These species have the tails shorter than the preceding, especially the one which is traversed by the middle branch of the median vein. Others succeed, very similar to the preceding, but which are destitute of the patch of the fore-wings, and are followed by the smaller, duller-coloured North American and European species which have only one short tail, which is even wanting in *Th. Rubi*. I am by no means satisfied that the genus described above under the name of *Dipsas* ought not to be united to *Thecla*; and the like considerations have induced me, after much hesitation, to add the genera *Ilerda*, *Anthene*, and *Ialmenus* to the present group. The same principle which would warrant their separation ought to induce the establishment of a considerably greater number of generic groups. The *Ilerdæ* are beautiful Indian species with naked eyes, setose palpi; antennæ with long joints ringed with white, and a very well marked club, and with three branches to the postcostal vein of the fore wings. The *Anthene* (after the removal of the three-tailed species) are natives of Africa, have hairy eyes, a long terminal joint to the palpi, long-jointed and ringed antennæ with a distinct club, three branches to the postcostal vein of the fore wings, and only a single tail to the hind wings; whilst the *Ialmeni* are Australian insects having similar palpi and veins, but with naked eyes, and very gradually thickened and short-jointed antennæ, and with only one tail to the hind wings, the single tail being, as in all the preceding species, traversed by the first branch of the median vein. These last have a transverse black spot at the extremity of the discoidal cell of the fore wings, a character otherwise peculiar to the *Lycænæ*.

Many of the species have the under side of the wings marked with one or two delicate lines of a pale colour on a dark ground, whence they have been named by collectors hair-streak butterflies. The caterpillars appear to frequent trees and shrubs, rather than herbaceous plants, as is the custom with the *Lycænæ*; and the perfect insects are enabled, by their robust structure, to fly with great power over the branches even of the highest oaks and other forest trees.

THECLA.

1. *Th. MARSYAS* *Linnaeus, Syst. Nat.* ii. p. 788. (*Papilio M.*); *Clerck, Icones*, t. 41. f. P.; *Cramer, Pap.* pl. 332. f. A. B.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 272.; *Godart, Enc. M.* ix. p. 620.
Brazil.

B. M.

2. *Th. GABRIELA* *Cramer, Pap.* pl. 6. f. C. D. (*Papilio G.*); *Fabr. Mant. Ins.* ii. p. 65.; *Godart, Enc. M.* ix. p. 622.; *Donovan, Nat. Repos.* ii. pl. 44. f. 2.
Brazil.

B. M.

3. TH. ENDYMION *Fabricius, Mant. Ins.* ii. p. 67. (Papilio E.); *Herbst, Pap.* pl. 298. f. 1, 2.; *Godart, Enc. M.* ix. p. 622.
Endymion regalis *Swainson, Zool. Ill.* 2d series, pl. 85.
Papilio regalis *Cramer, pl.* 72. f. E. F.
Surinam.
4. TH. GANYMEDES *Fabricius, Mant. Ins.* ii. p. 66. (Papilio G.); *Cramer, Pap.* pl. 40. f. C. D. (male); *Godart, Enc. M.* ix. p. 623.
West Indies.
5. TH. VENUS *Fabricius, Mant. Ins.* ii. p. 67. (Hesperia V.); *Godart, Enc. M.* ix. p. 623.
Papilio imperialis *Cramer, Pap.* pl. 76. f. E. F.; *Swains. Zool. Ill.* 2d series, pl. 88. (Arcas Imp.).
Brazil, Surinam. B. M.
6. TH. CYPRIA *Hübner, Zutrage, f.* 945, 946.
Yucatan.
7. TH. DUCALIS *Westw. MS.; Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 77. f. 1.
Brazil. B. M.
8. TH. MAVORS *Hübner, Zutrage, f.* 189, 190.
Surinam.
9. TH. ACTÆON *Fabricius, Ent. Syst.* v. p. 829. (Hesperia A.).
Brazil. B. M.
10. TH. HALESES *Cramer, Pap.* t. 98. f. B. C. (Papilio H.); *Fabricius, Mant. Ins.* ii. p. 67.; *Godart, Enc. M.* ix. p. 626.; *Boisd. et Lec. Léop. Am. Sept.* t. 25. f. 1—5.
North America. B. M.
11. TH. VENULIUS *Cramer, Pap.* pl. 243. f. G. (Papilio H.); *Godart, Enc. M.* ix. p. 621.
Surinam.
12. TH. DOLICHOS.
Atlides Dolichos *Hübner, Zutr.* f. 219, 220.
Georgia, N. Amer.
13. TH. SITO *Boisduval, Sp. gén. Léop.* i. t. 22. f. 5.
Mexico, Honduras. B. M.
14. TH. METON *Cramer, Pap.* t. 201. f. D. E. (Papilio M.); *Fabricius, Mant. Ins.* ii. p. 67.; *Godart, Enc. M.* ix. p. 630.
Guiana, Surinam. B. M.
15. TH. PHALEROS *Linnaeus, Syst. N.* ii. p. 797. (Papilio Ph.); *Godart, Enc. M.* ix. p. 628. 41.; *Drury, 2d ed.* l. c. sub.
Papilio Agis *Drury, Ill.* iii. t. 26. f. 3, 4.
Hesperia Chiton *Fabricius, Ent. Syst.* iii. pt. 1. p. 262.; *Donovan, Ins. Ind.* pl. 39. f. 1. 1 a.
Papilio Silenus *Cramer, Pap.* pl. 282. f. 2.
Brazil, Venezuela. B. M.
16. TH. POLYBE *Linnaeus, Syst. N.* ii. p. 787. (Papilio P.); *Godart, Enc. M.* ix. p. 626.
Papilio Atys *Cramer, Pap.* pl. 259. f. G. H.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 267.
Brazil, Guiana. B. M.
17. TH. ÆOLUS *Fabricius, Mant. Ins.* ii. p. 70.
Papilio Æ. (male) *Godart, Enc. M.* ix. p. 628.; *Donovan, Ins. Ind.* pl. 42. f. 1.
Papilio Thallus *Cramer, Pap.* t. 259. f. C. D.
March 1. 1852.
- (Female) Papilio Pelion *Cramer, Pap.* t. 6. f. E. F.; *Fabricius, Mant. Ins.* ii. p. 66.
Para, Guiana. (Type in Mus. Banks.) B. M.
18. TH. IRUS *Godart, Enc. M.* ix. p. 674. 177. (Polyommatus I.); *Boisduval et Leconte, Léop. Amér. Sept.* p. 131. f. 5—8.
United States, N. America.
19. TH. ROMULUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 316. (Hesperia R.); *Donovan, Ins. Ind.* pl. 46. f. 5.; *Godart, Enc. M.* ix. p. 674.
South America. B. M.
20. TH. EURISIDES.
Iolaus Eurisides *Hübner, Zutr.* f. 297, 298.
Brazil.
21. TH. LINCUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 289. (Hesperia L.).
Papilio Linus *Ræmer, Ins.* t. 19. f. 10, 11.
Papilio Ætolus *Cramer, Pap.* pl. 340. f. F. G. H.; *Godart, Enc. M.* ix. p. 645.
Surinam, Brazil.
22. TH. PHILIPPUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 283. (Hesperia Ph.); *Godart, Enc. M.* ix. p. 646.; *Donovan, Ins. India,* pl. 42. f. 3.
India.
23. TH. ÆTOLUS.
Rusticus Arm. Ætolus *Hübner, Samml. exot. Schm.* Band i. pl. —.
Venezuela. B. M.
24. TH. PHOLEUS *Cramer, Pap.* pl. 163. f. D. E. (Papilio P.); *Fabr. Mant. Ins.* ii. p. 66.; *Godart, Enc. M.* ix. p. 643.
Para, Surinam. B. M.
25. TH. MELIBOEUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 271. (Hesperia M.); *Godart, Enc. M.* p. 629.; *Donovan, India,* pl. 41. f. 1.
Brazil, Venezuela (not India). B. M.
26. TH. BATTUS *Cramer, Pap.* t. 51. f. F. G.; *Godart, Enc. M.* ix. p. 628.
Papilio Bathis *Fabricius, Mant. Ins.* ii. p. 67.; *Herbst, Pap.* t. 291. f. 10.
Surinam, Mexico, Honduras. B. M.
27. TH. PELAGON *Cramer, Pap.* pl. 282. f. C. D. (Papilio P.); *Godart, Enc. M.* ix. p. 629.
Papilio Myrtilis *Cramer, Pap.* pl. 380. f. B. C.
South America.
28. TH. ANACREON *Fabricius, Ent. Syst.* iii. pt. 1. p. 268. (Hesperia A.); *Godart, Enc. M.* ix. p. 629.
"In Indiis," Fabricius.
29. TH. HYACINTHUS *Fabricius, Mant. Ins.* ii. p. 67. (Papilio H.); *Cramer, Pap.* pl. 36. f. E.; *Godart, Enc. M.* ix. p. 642.
West Indies.
30. TH. CYANUS *Fabricius, Mant. Ins.* ii. p. 67. (Papilio C.); *Cramer, Pap.* pl. 76. f. C. D.; *Godart, Enc. M.* ix. p. 642.
West Indies.
31. TH. AUNUS *Fabricius, Mant. Ins.* ii. p. 66. (Papilio A.); *Cramer, Pap.* pl. 23. f. E. F.; *Godart, Enc. M.* ix. p. 642.
Curaçoa.

32. TH. SIMAETHUS *Drury, Ill. i. t. 1. f. 3. and 3.* (Papilio S.); *Fabricius, Mant. Ins. ii. p. 70.*; *Hübner, Zutr. f. 423, 424.*; *Godart, Enc. M. ix. p. 643.*
Pernambuco. B. M.
33. TH. HEMON *Fabricius, Mant. Ins. ii. p. 67.* (Papilio H.); *Cramer, Pap. t. 20. f. D. E.*; *Godart, Enc. M. ix. p. 624.*
Brazil, West Indies. B. M.?
34. TH. ACMON *Fabricius, Mant. Ins. ii. p. 70.* (Papilio A.); *Cramer, Pap. pl. 51. f. C. D.*; *Godart, Enc. M. ix. p. 624.*
Brazil, Surinam. (Type in Mus. Banks.) B. M.?
35. TH. EMATHEON *Fabricius, Mant. Ins. ii. p. 66.* (Papilio E.); *Cramer, Pap. pl. 63. f. F. G.*; *Godart, Enc. M. ix. p. 623.*
Surinam.
36. TH. AROGEUS *Cramer, Pap. pl. 333. f. A. B.* (Papilio A.); *Godart, Enc. M. ix. p. 623.*
Guiana, Brazil.
37. TH. POLIBETES *Cramer, Pap. pl. 341. f. C. D.* (Papilio P.); *Godart, Enc. M. ix. p. 624.*
Guiana, Brazil.
38. TH. LISUS *Stoll, Suppl. Cram. Pap. pl. 38. f. 2. 2 B.* (Papilio L.); *Godart, Enc. M. ix. p. 624.*
Surinam.
39. TH. SINNIS *Godart, Enc. M. ix. p. 625.* (Polyommatus S.).
Brazil.
40. TH. NAUTES *Cramer, Pap. pl. 233. f. F. G.* (Papilio N.); *Godart, Enc. M. ix. p. 625.*
Surinam.
41. TH. ELIS *Cramer, Pap. pl. 233. f. D.* (Papilio E.); *Godart, Enc. M. ix. p. 625.* (An Th. Nautes ♀?).
Surinam.
42. TH. AUGUSTUS *Fabricius, Ent. Syst. iii. pt. 1. p. 275.* (Hesperia A.); *Godart, Enc. M. ix. p. 630.* (not of Kirby).
America.
43. TH. DOLYLAS *Cramer, Pap. pl. 111. f. B. C.* (Papilio D.); *Godart, Enc. M. ix. p. 633.*
Brazil, Surinam.
44. TH. LAUSUS *Cramer, Pap. pl. 233. f. E.* (male), (Papilio L.); *Godart, Enc. M. ix. p. 630.*
Papilio Libanius Cramer, Pap. pl. 379. f. H. I. (female).
Surinam.
45. TH. SOPHOCLES *Fabricius, Ent. Syst. iii. pt. 1. p. 267.* (Hesperia S.); *Donovan, Ins. India, pl. 40. f. 2.*; *Godart, Enc. M. ix. p. 631.*
"In Indiis," Fabricius.
46. TH. ISMARUS *Cramer, Pap. pl. 176. f. F.* (Papilio I.) (male); *Godart, Enc. M. ix. p. 630.*
Papilio Philanthus Cramer, Pap. pl. 333. f. C. D. (female?).
Surinam.
47. TH. EURIPIDES *Fabricius, Ent. Syst. iii. pt. 1. p. 267.* (Hesperia E.); *Godart, Enc. M. ix. p. 631.*
"In Indiis," Fabricius.
48. TH. ETHEMON *Cramer, Pap. pl. 48. f. D.* (Papilio E.); *Godart, Enc. M. ix. p. 642.*
West Indies.
49. TH. LYCABAS *Cramer, Pap. pl. 117. f. E.* (Papilio L.); *Godart, Enc. M. ix. p. 642.*
Surinam.
50. TH. IANIAS *Cramer, Pap. t. 213. f. D. E.* (Papilio I.); *Fabricius, Mant. Ins. ii. p. 65.*; *Godart, Enc. M. ix. p. 641.*
Papilio Hassan Stoll, Suppl. Cram. pl. 38. f. 4. 4 D.
Brazil. B. M.
51. TH. HERODOTUS *Fabricius, Ent. Syst. iii. pt. 1. p. 286.* (Hesperia H.); *Donovan, Ins. India, pl. 39. f. 2.*; *Godart, Enc. M. ix. p. 641.*
Papilio Eryx Fabricius, Mant. Ins. ii. p. 70., Ent. Syst. iii. pt. 1. p. 283.
Papilio Amyntor Cramer, Pap. pl. 48. f. E.
South America. B. M.
52. TH. MENALCAS *Cramer, Pap. pl. 259. f. A. B.* (Papilio M.).
Pernambuco.
53. TH. THRASYLLUS.
Brangas Thrasyllus Hübner, Zutr. f. 965, 966.
Surinam.
54. TH. SYNCELLUS *Cramer, Pap. pl. 334. f. A. B.* (Papilio S.); *Godart, Enc. M. ix. p. 626.*
Var. ? *Papilio Bitias Cramer, Pap. pl. 104. f. E.*
Para, Honduras. B. M.
55. TH. ORTYGNUS *Cramer, Pap. pl. 243. f. A. B.* (Papilio O.); *Godart, Enc. M. ix. p. 621.*
Pernambuco, Surinam. B. M.
56. TH. RUSTAN *Stoll, Suppl. Cramer, Pap. t. 38. f. 1. 1 A.* (Papilio R.); *Godart, Enc. M. ix. p. 621.*
Thecla Macaria Swainson, Zool. Ill. 1st series, v. p. 3. t. 133.
Brazil. B. M.
57. TH. NARBAL *Stoll, Suppl. Cramer, Pap. pl. 38. f. 6. 6 F.* (Papilio N.); *Godart, Enc. M. ix. p. 627.*; *Lucas, Lep. exot. pl. 44. f. 2.*
Guiana, Brazil.
58. TH. INACHUS *Cramer, Pap. pl. 36. f. H. I.* (Papilio I.); *Godart, Enc. M. ix. p. 627.*
West Indies.
59. TH. PETUS *Fabricius, Mant. Ins. ii. p. 66.* (Hesperia P.); *Godart, Enc. M. ix. p. 627.*
Papilio Pelops Cramer, Pap. pl. 341. f. A.
Surinam.
60. TH. LYDUS *Hübner, Verz. bek. Schm. n. 753.* (Bithys L.).
Papilio Eryx Cramer, Pap. pl. 143. f. D.
Surinam.
61. TH. TEPHREUS.
Bithys Tephreus Hübner, Zutr. f. 959, 960.
— ?
62. TH. DINDYMAON *Cramer, Pap. pl. 134. f. A. B.* (Papilio D.); *Fabricius, Ent. Syst. iii. pt. 1. p. 266.*; *Godart, Enc. M. ix. p. 627.*
Brazil, Surinam. B. M.

63. TH. CERANUS *Cramer, Pap.* pl. 332. f. C, D. (Papilio C.); *Fabr. Ent. Syst.* III. pt. 1. p. 276.; *Godart, Enc. M.* IX. p. 627.
Surinam, Guiana. ? B. M.
64. TH. THALES *Fabricius, Ent. Syst.* III. pt. 1. p. 268. (Hesperia T.); *Godart, Enc. M.* IX. p. 625.; *Donovan, Ins. India*, pl. 40. f. 4.
Brazil. B. M.
65. TH. CYLLARUS *Cramer, Pap.* t. 27. f. C. D. (Papilio C.).
Papilio Strephon Fabricius, Mant. Ins. II. p. 69.; *Godart, Enc. M.* IX. p. 632.; *Donovan, Ins. India*, pl. 42. f. 2.
Brazil. (Type in Mus. Banks.) B. M.
66. TH. AGRIPPA *Fabricius, Ent. Syst.* III. pt. 1. p. 259. (Hesperia A.); *Godart, Enc. M.* IX. p. 628.
Honduras. B. M.
67. TH. STROPHIUS *Godart, Enc. M.* IX. p. 632. (Polyommatus S.).
Brazil.
68. TH. DINDYMUS *Cramer, Pap.* pl. 46. f. F. G. (Papilio D.) (male).
Papilio Sphinx Fabricius, Mant. Ins. II. p. 67., *Ent. Syst.* III. pt. 1. p. 270. (female); *Godart, Enc. M.* IX. p. 632.; *Hübner, Zutr.* f. 635, 636.
Surinam and Brazil (not East Indies), Java (Hübner). B. M.
69. TH. CITHONIUS *Godart, Enc. M.* IX. p. 633. (Polyommatus C.).
Guiana.
70. TH. LEUCOPHÆUS.
Bithys leucophæus Hübner, Zutr. f. 87, 88.
Brazil.
71. TH. PHRUTUS.
Bithys Phrutus Hübner, Zutr. f. 703, 704.
Java.
72. TH. BAETON *Sepp, Natur. Hist. Surin. Vlinders*, pl. 8. (Papilio B.).
Surinam.
73. TH. AMBRAX *Westw. MS.*; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 75. f. 7.
Brazil. B. M.
74. TH. ERIX *Cramer, Pap.* pl. 82. f. B. (Papilio E.).
Bithys Tyrhenus Hübner, Verz. bek. Schm. II. 748.
Surinam.
75. TH. UMBRATUS.
Sithon umbratus Hübner, Zutr. f. 955, 956.
Yucatan.
76. TH. CUPENTUS *Cramer, Pap.* pl. 337. f. F. G. (Papilio C.);
Godart, Enc. M. IX. p. 631.
Para, Surinam. B. M.
77. TH. SICHÆUS *Cramer, Pap.* t. 144. f. C. D. (Papilio S.); *Godart, Enc. M.* IX. p. 632.
Para, Surinam. B. M.
78. TH. CELMUS *Cramer, Pap.* t. 55. f. G. H. (Papilio C.).
Thecla Echion var. Godart, Enc. M. IX. p. 637. n. 73.
Surinam, Brazil. B. M.
79. TH. CROELUS *Cramer, Pap.* pl. 333. f. G. H. (Papilio C.).
South America. B. M.
80. TH. ECHION *Linnaeus, Syst. N.* II. p. 788. (Papilio E.); *Fabricius, Ent. Syst.* III. pt. 1. p. 269.; *Godart, Enc. M.* IX. p. 637.; *Klemann, Ins. Suppl. Roessel*, I. t. 7. f. 3, 4.; *Esper, Pap.* I. t. 20. f. 1.
South America. B. M.
81. TH. EURYTULUS *Hübner, Samml. exot. Schm.* Band. II. pl. —.
(*Tmolus E.*).
— ?
82. TH. BASALIDES *Hübner, Zutr.* f. 977, 978. (*Tmolus B.*).
Brazil.
83. TH. CLEON *Fabricius, Mant. Ins.* II. p. 69. (Papilio C.); *Godart, Enc. M.* IX. p. 636.
Brazil. (Type in Mus. Banks.)
84. TH. CECROPS *Fabricius, Ent. Syst.* III. pt. 1. p. 270. (Hesperia C.); *Godart, Enc. M.* IX. p. 636.
"In Indiis."
85. TH. TYRTÆUS *Fabricius, Ent. Syst.* III. pt. 1. p. 271. (Hesperia T.); *Godart, Enc. M.* IX. p. 637.; *Donovan, Ins. India*, pl. 41. f. 2.
India.
86. TH. ? CORIOLANUS *Fabricius, Ent. Syst.* III. pt. 1. p. 284. 91.
(Hesperia C.); *Jones, Icon.* VI. t. 48. f. 1.
"In Indiis," Fabricius.
87. TH. GENIUS *Hübner, Zutr.* f. 727, 728. (*Lamprospilus G.*).
West Indies.
88. TH. PERICLES *Fabricius, Ent. Syst.* III. pt. 1. p. 273. (Hesperia P.); *Godart, Enc. M.* IX. p. 622.; *Donovan, Ins. Ind.* pl. 42. f. 4.
"In Indiis," Fabricius.
89. TH. PAN *Drury, Ill.* II. t. 23. f. 34. (Papilio P.) (nec Fabricius and Donovan).
Jamaica. B. M.
90. TH. MARS *Fabricius, Mant. Ins.* II. p. 66. (Papilio M.); *Godart, Enc. M.* IX. p. 635. 66.; *Hübner, Samml. exot. Schm.* Bd. II. pl. —.
Papilio Acis Drury, Ill. I. t. 1. f. 22.; *Cramer, Pap.* pl. 175. f. C. D.
Papilio Ixion Fabricius, Mant. Ins. II. p. 66. ?
Jamaica. B. M.
91. TH. ERGEUS *Godart, Enc. M.* IX. p. 635. (Polyommatus E.).
Antilles.
92. TH. NEBIS *Godart, Enc. M.* IX. p. 636. (Polyommatus N.).
Brazil.
93. TH. BEON *Cramer, Pap.* pl. 319. f. B. C. (Papilio B.); *Godart, Enc. M.* IX. p. 636.
Pernambuco, Para. B. M.
94. TH. VESULUS *Cramer, Pap.* t. 34. f. I. K. (Papilio V.).
Brazil. B. M.
95. TH. CETHEGUS *Stoll, Suppl. Cram. Pap.* pl. 38. f. 5. 5 E. (Papilio C.); *Godart, Enc. M.* IX. p. 640.
Surinam.

96. TH. CALUS *Godart, Enc. M. ix. p. 640. (Polyommatus C.).*
America.
97. TH. HUGO *Godart, Enc. M. ix. p. 640. n. 84. (Polyommatus H.);*
Doubl. Westw. & Hewits. Gen. D. Lep. pl. 74. f. 4. ?
Brazil. B. M.
98. TH. POEAS *Boisd. et Lec. Lép. Am. Sept. t. 35. f. 14. (Thecla P.);*
Hübner, Samml. exot. Schm. Bd. i. pl. — B. M.
United States, Honduras.
99. TH. DAMASTUS *Godart, Enc. M. ix. p. 640. (Polyommatus D.).*
Papilio Damon Cramer, Pap. pl. 390. f. C. D.
Virginia.
100. TH. TELEMUS *Fabricius, Mant. Ins. ii. p. 67. (Papilio T.);*
Cramer, Pap. pl. 4. f. D. E.; Godart, Enc. M. ix. p. 641.
South America.
101. TH. M. ALBUM *Boisduval et Leconte, Lép. Am. Sept. pl. 26.*
United States, N. America.
102. TH. PSYCHE *Boisduval et Leconte, Lép. Am. Sept. pl. 27.*
United States, N. America.
103. TH. ARSACE *Boisduval et Leconte, Lép. Am. Sept. pl. 32. f. 1—5.*
United States, N. America.
104. TH. AUGUSTINUS *Westwood MS.*
Thecla Augustus Kirby, Faun. Bor. Amer. Ins. p. 298.
pl. 3. f. 4, 5. (not of Fabricius).
Northern parts of North America.
105. TH. DAMON *Cramer, Pap. t. 390. f. C. D. (Papilio D.).*
Thecla Smilacis Boisd. et Leconte, Icon. Lép. Am. Sept.
t. 33. f. 5—8. B. M.
United States.
106. TH. CALANUS *Hübner, Samml. exot. Schm. Band i. pl. —. (Rusticus*
Arm. C.).
Polyommatus Falacer Godart, Enc. M. ix. p. 633.;
Boisd. et Leconte, Icon. Lép. Am. Sept. t. 29. f. 1—5. B. M.
United States.
107. TH. FAVONIUS *Smith & Abbott, Lep. Ins. Georgia, i. t. 14. (Papilio*
F.); Godart, Enc. M. ix. p. 635. (not of Boisduval.) B. M.
United States.
108. TH. MELINUS *Hübner, Zutr. f. 121, 122. (Strymon M.).*
Thecla Silenus E. Doubleday, List Lep. Brit. Mus. pt. 2.
p. 31.
Thecla humuli Harris, Rep. Ins. Mass. p. 216.
Thecla Favonius Boisd. et Lec. Lép. Am. Sept. t. 30. f.
1, 2. B. M.
United States.
109. TH. HYPERICI *Boisd. et Lec. Lép. Am. Sept. t. 28.*
United States.
110. TH. LIPAROPS *Boisd. et Lec. Lép. Am. Sept. t. 99.*
United States.
111. TH. BAZOCHII *Godart, Enc. M. ix. p. 681. (Polyommatus B.).*
Brazil. B. M.
112. TH. BURASTUS *Cramer, Pap. t. 332. f. G. H. (Papilio B.).*
Hesperia Columella Fabricius, Ent. Syst. iii. pt. 1. p.
282.; Godart, Enc. M. ix. p. 638. B. M.
Brazil.
113. TH. ANTIBUBASTUS *Hübner, Zutr. f. 99, 100. (Hemiargus A.).*
Georgia, Florida.
114. TH. MEGACLES *Cramer, Pap. pl. 333. f. E. F. (Papilio M.);*
Godart, Enc. M. ix. p. 638.
Surinam, Brazil.
115. TH. MEGARUS *Godart, Enc. M. ix. p. 638. (Polyommatus M.).*
Brazil.
116. TH. GABELUS *Godart, Enc. M. ix. p. 639. (Polyommatus G.).*
Brazil.
117. TH. JEBUS *Godart, Enc. M. ix. p. 639.; Hübner, Samml. exot.*
Schm. Bd. iii. pl. — B. M.
Brazil.
118. TH. MONCUS *Fabricius, Mant. Ins. ii. p. 65. (Hesperia M.);*
Godart, Enc. M. ix. p. 618.
Africa. (Type in Mus. Banks.) B. M.
119. TH. NEPHON *Hübner, Zutr. f. 203, 204. (Licus N.); Boisduval et*
Leconte, Lép. Am. Sept. pl. 33. f. 1—4.
Florida.
120. TH. THEOCRITUS *Fabricius, Ent. Syst. iii. pt. 1. p. 289. (Hesperia*
T.); Godart, Enc. M. ix. p. 633.; Donovan, Ins.
India, pl. 45. f. 4.
"In Indüs," Fabricius.
121. TH. RUBI *Linnaeus, Syst. Nat. ii. p. 791. (Papilio R.); Fabricius,*
Ent. Syst. iii. pt. 1. p. 287.; Hübner, Eur. Schm. Pap.
f. 364, 365. 786.; Godart, Enc. M. ix. p. 673., Pap.
France, i. pl. 10. f. 3. and pl. 10. bis f. 5. B. M.
Germany, England, &c.
122. TH. ROBORIS *Esper, Pap. t. 183. Cont. 58. f. 5. (Papilio R.);*
Ochs. Pap. Eur. t. 1.
Papilio Evippus Hübner, Eur. Schm. Pap. f. 366, 367.;
Godart, Enc. M. ix. p. 684., Pap. France, ii. pl. 5.
22. f. 1, 2.; Gerhard, Lycæn. pl. 3. f. 4. B. M.
South Europe.
123. TH. SASSANIDES *Kollar, Trans. Acad. Vienna, i. (1849) p. 10.*
South of Persia.
124. TH. CAUDATULA *Zeller in Isis, 1848, p. 6.*
South-Eastern Europe, Patara, Macri.
125. TH. MELANTHO *Klug & Ehrenberg, Symb. Phys. pl. 40. f. 10, 11.*
Syria.
126. TH. LEDERERI *H. Schäffer, Suppl. Hübner, f. 445—448.; Gerhard,*
Lycæn. pl. 4. f. 6. (Argus L.).
Turkey.
127. TH. ABDOMINALIS *Gerhard, Lycæn. pl. 4. f. 3. a, b.*
Turkey.
128. TH. ACACIÆ *Fabricius, Mant. Ins. ii. p. 69. (Papilio A.); Herbst,*
Pap. t. 308. f. 3, 4.; Godart, Enc. M. ix. p. 650.,
Pap. France, ii. pl. 21. f. 5, 6, 7.; Hübner, Eur.
Schm. Pap. 743—746.; Gerhard, Lycæn. pl. 1. f. 4.
Hesperia cerasi? Fabricius, Ent. Syst. iii. pt. 1. p. 299.
See Zeller in Stettin Z. 1847, 331.
Southern Europe.

129. TH. *ÆSCULI* *Hübner, Eur. Schm. Pap. f. 559, 560, 690, 691.* (Papilio *Æ.*); *Ochs. Schm. v. Eur. II. p. 107.*; *Godart, Léop. France, II. t. 21. f. 3, 4., Enc. M. IX. p. 649.*; *Gerhard, Lyc. pl. 2. f. 1. a. b. c. (var. pl. 4. f. 5. a. b. c. var. pl. 4. f. 4.)*
Europe, Portugal, Spain. B. M.
130. TH. *SPINI* *Fabricius, Mant. Ins. II. p. 68. (Hesperia S.); Hübner, Eur. Schm. Pap. f. 376, 377, 674, 675, 692, 693.*; *Godart, Léop. France, II. t. 21. f. 8, 9., Enc. M. IX. p. 650.*; *Gerhard, Lyc. pl. 2. f. 5, var. pl. 3. f. 1.*
Papilio Lynceus Esper, Pap. Eur. t. 39., Suppl. 15. f. 3.
Europe, Germany. B. M.
131. TH. *PRUNI* *Linnaeus, S. N. II. p. 788. (Papilio P.); Hübner, Eur. Schm. Pap. f. 386, 387.*; *Fabricius, Ent. Syst. III. pt. 1. p. 277.*; *Godart, Léop. France, I. t. 9. f. 2., Enc. M. IX. p. 647.*
Papilio Prorsas Hufnag. Berl. Mag. II. p. 68.?
Europe, England. B. M.
132. TH. *W-ALBUM* *Knoch, Beytr. t. 6. f. 1, 2. (Papilio W-a.); Hübner, Eur. Schm. Pap. f. 380, 381.*; *Godart, Enc. M. IX. p. 648., Léop. France, I. pl. 9. f. 3. and pl. 9. ter f. 2.*; *Stephens, Ill. II. II. p. 66.*
Papilio W Latinum Lang, Verz. II. p. 46.
Papilio Pruni Bergstr. Nom. I. p. 71.; *Lewin, Brit. Butt. t. 44.*; *Stephens, Ill. I. p. 77. (not of Linnaeus, &c.).*
Germany, England. B. M.
133. TH. *QUERCUS* *Linnaeus, S. N. II. p. 788. (Papilio Q.); Lewin, Brit. Butt. t. 43.*; *Hübner, Eur. Schm. Pap. t. 368—370, 621.*; *Gerhard, Lyc. pl. 3. f. 3. var. (Bellus) pl. 4. f. 2.*; *Godart, Léop. France, I. t. 9. bis f. 1. and pl. 9. ter f. 3.*
Papilio Epeus Sulzer, Ins. t. 18. f. 10.
Germany, France, England. B. M.
134. TH. *BETULÆ* *Linnaeus, S. N. II. p. 787. (Papilio B.); Lewin, Brit. Butt. pl. 42.*; *Hübner, Schm. v. Eur. Pap. f. 383—385.*; *Godart, Léop. Fr. t. 9. f. 1., Enc. M. IX. p. 647.*; *Gerhard, Vers. M. Lyc. pl. 1. f. 1. a. b. c. (var. pl. 3. f. 2.)*
Europe, England. B. M.
135. TH. *LYNCEUS* *Fabricius, Mant. Ins. II. p. 69. (Hesperia L.); Godart, Léop. Fr. t. 9. ter f. 1., Enc. M. IX. p. 649.*; *Gerhard, Lyc. pl. 2. f. 2. a. b. c. (var. Bischoffii pl. 2. f. 4.)*
Papilio Ilicis Esper, Schm. t. 39., Suppl. 15. f. 1.; *Hübner, Eur. Schm. Pap. f. 378, 379, 863—866.*; *Ochsenh. Schm. v. Eur. I. II. p. 105.*
Papilio Cerasi Herbst, Pap. t. 307. f. 8, 9.; *Gerhard, pl. 4. f. 1.*; *Westw. & Humphr. Brit. Butt. pl. 27. f. 6—8.*
Europe, Germany. B. M.
136. TH. *CALISTO* *Boisduval MS.*; *E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 28. (Anthene? C.); Doubl. Westw. & Hewits. Gen. D. Lep. pl. 75. f. 6.*
Sierra Leone.
137. TH. *EVAGORAS* *Donovan, Ins. N. Holl. pl. 30. f. 1. (Papilio E.); Boisduval, Voy. Astr. Ent. pt. 1. p. 74.*; *Hübner, Zutr. f. 175, 176.*; *Godart, Enc. M. IX. p. 593.*
Australia. B. M.
138. TH. *MYRSILUS* *E. Doubleday, List Lep. Brit. Mus. pt. 2. p. 29. (Ialmenus M.); Doubl. Westw. & Hewits. Gen. D. Lep. pl. 75. f. 3.*
Van Diemen's Land. B. M.
139. TH. *CHLORINDA* *Hombron et Jacquenot, Voy. Pole Sud, Léop. pl. 3. f. 15, 16.*
Van Diemen's Land.
140. TH. *EPICLES* *Godart, Enc. M. IX. p. 646. (Polyommatus E.); Horsfield, Cat. Lep. E. I. C. p. 92. (Thecla E.) pl. 1. f. 3.*
Heliophorus Belenus Hübner, Zutr. f. 785, 786.
Java, Silhet. B. M.
141. TH. *ANDROCLES* *Boisduval MS. (Ilerda A.); Doubl. Westw. & Hewits. Gen. D. Lep. pl. 75. f. 2.*
Silhet. B. M.
142. TH. *SENA* *Kollar in Hugel's Reise d. Kaschmir, p. 415. pl. 5. f. 3, 4. (Polyommatus S.).*
Ilerda Cadma Boisduval MS.; *E. Doubleday, List Lep. Brit. Mus. II. p. 25.*
Mussooree, Himalaya. B. M.
143. TH. *PANAVA* *Westw. MS.*
Polyommatus Pavana Kollar in Hugel's Reise d. Kaschmir, p. 416. t. 5. f. 5, 6. (not of Horsfield).
Mussooree, Himalaya.
144. TH. *TAMU* *Kollar in Hugel's Reise d. Kaschmir, p. 417. t. 5. f. 7, 8. (Polyommatus T.).*
Mussooree, Himalaya.

Genus XII. **LYCÆNA.**

LYCÆNA Fabricius, *Ochsenheim.* (fam. A.), *Boisduval* (*Ind. Meth.*), *E. Doubleday.*

POLYOMMATUS p. *Latreille, Godt., Stephens, Curtis.*

POLYOMMATUS, *PITHECOPS*, and *LYCÆNA* *Horsfield.*

ARGUS *Geoffroy, Boisduval (olim).*

CATOCHRYSOPS *Boisduval (olim).*

POLYOMMATUS, *ERINA*, and *LUCIA* p. *Swainson.*

BODY small, slender, and compressed: wings generally large, and of a delicate texture; in the majority of the species blue on the upper side (at least in the males) and grey or greyish white beneath, and more or less ocellated; the majority having a small black transverse spot at the extremity of the discoidal cell of the fore wings.

HEAD small, hairy, the hairs often forming a small tuft on the forehead.

Eyes moderate-sized, and almost always finely setose (naked in *L. Theophrastus*, *Rosimon*, *Alsus*, *Hylax*, &c.).

Labial Palpi moderately elongated, compressed, scaly; the middle joint in many species also furnished beneath with detached bristly hairs. Terminal joint rather variable in length, but always shorter than half the length of the second joint, and scarcely varying in length in the opposite sexes, slender, nearly naked, acute at the tip.

Antennæ of moderate length or rather short, very slender, with long joints ringed with white; the club distinct, suddenly formed, oblong-ovate, depressed, and sometimes spoon-shaped in dried specimens; the joints of the club very short.

Fore Wings generally elongate, subtriangularly ovate, with the costal margin moderately arched. Apical margin always more or less convex. Inner margin rather short. Costal vein short. Postcostal vein wide apart from the costa, with two branches preceding the extremity of the discoidal cell, and with a third short branch about half-way between the cell and the tip of the wing; the cell is closed by extremely slender middle and lower disco-cellular veins, which are transverse, the latter uniting with the third branch of the median vein at a moderate distance beyond its origin; the upper disco-cellular vein is very oblique, or almost longitudinal, forming, in fact, the base of the upper discoidal vein.

Hind Wings generally elongate-ovate, entire, slightly scalloped, or furnished with a very slender short tail at the extremity of the first branch of the median vein, the anal angle itself being seldom prominent.

Fore Legs of the male slender. The tibia in most species terminated by a short curved horny point; in others simple. Tarsus slender, exarticulate*, elongate, slightly curved, and attenuated at the tip, which is terminated by a horny curved point, and armed beneath with short spines. *Fore Legs* of the female similar in size and shape to those of the male, except that the tarsus is articulated and unguiculated like those of the four hind legs.

Four Hind Legs short, slender.

CATERPILLAR onisciform, gibbo-scutate or oblongo-scutate, with the head and feet small and scarcely perceptible; the body laciniate, and the back convex and generally beautifully coloured.

CHRYsalis oblong, very convex, smooth, obtuse at each end, and marked with obscure spots; in a few species armed with short acute tubercles.

The difficulty in characterising the last genus is scarcely lessened in attempting the same task with the present group; there are, however, several striking points of difference between them, whereby the great majority of the species may at once be separated from each other. The generally weaker character of all the parts of the body of these insects, the pale blue colour of the upper surface of most of them (especially in the male sex), and the ocellated under surface will ordinarily distinguish them from the *Theclæ*. The palpi are here, in the great majority of the species, bristly on the under side, and the eyes generally hirsute. Moreover, the very slender antennæ, with long intermediate joints ringed with white, and terminated by a suddenly formed broad, often spoon-shaped, club; the fore-wings always furnished with three branches to the postcostal vein, and the hind wings entire and rounded along the outer margin, or furnished with a very delicate short tail; the small horny hook at the extremity of the anterior tibiæ of both sexes, in many of the species; and the attenuated slightly curved tip of the fore tarsi of the male *Lycænæ*, ending in a short, curved, horny point, will generally enable us to determine the limits of the two groups. Of the species which I have carefully examined, I find that of the tailed species, *L. Theophrastus* and *Rosimon* have naked eyes, and scaly, not bristly, palpi, and their fore tibiæ are not hooked at the tip. *L. Ethion*, *Roxus*, *Psittacus*, &c., have hairy eyes, and somewhat, although slightly, bristly palpi, and simple fore tibiæ. *L. Batica*, however, and a few closely allied species

* In many species the fore tarsi of the male are marked with rings of dark scales, causing them to appear articulated.

have hairy eyes, bristly palpi, and fore tibiæ hooked at the tip, differing in none of these respects from the tailless species, almost all of which have hairy eyes and bristly palpi. Amongst the latter, *L. Cassius*, *Argiolus*, &c., have the fore tibiæ not hooked at the tip as it is in *L. Corydon*, *Alexis*, *Arion*, &c. *L. Alsus* differs from all the rest in having the first branch of the postcostal vein confluent for a short distance with the costal vein, from which it again branches off to its ordinary length: the eyes are naked, the fore tibiæ are not hooked, and the four hind legs have very long prominent unguis, deeply notched at the base, with large pseudonychia, the outer division of which is long and slender, and the inner one broader and shorter, and the pulvillus is heart-shaped; whilst *L. (Pithecopus) Hylax* has also naked eyes, scaly palpi, and spurless fore tibiæ, but the wings have the veins arranged in the ordinary manner, and the unguis and their appendages are as small and inconspicuous as in the rest of the genus. I have been thus particular in examining these characters (several of which have never before been investigated by Lepidopterists), as I think they will afford more certain results in grouping the species than the more general characters hitherto resorted to.

The existence of the short hair-like tail to the hind wings in some of the species, affords an easy means of dividing the species into two groups (those without the tail forming, in fact, Dr. Horsfield's genus *Polyommatus*, and those with it being his *Lycænæ*), but, as above shown, *L. Batica* approaches too nearly to the tailless "blues" to allow us to adopt a generic separation, at least until we learn more of the transformations of the exotic tailed species. Again, if we adopt the separation of certain of the tailless species into a separate subgenus *Pithecopus*, we shall be under the necessity of restricting it to *L. Hylax*, and forming several other subgenera, with *L. Alsus*, *Cassius*, *Argiolus*, *Corydon*, *Alexis*, *Arion*, &c., as their types. Mr. Swainson's views on this group are noticed under the genus *Lucia*.

With these views, I have considered it most advisable to retain the genus in its unrestricted state. The species are very numerous; unlike the *Theclæ*, however, their metropolis is in the Old World; comparatively few and insignificant species being found in the New World. The majority of the "blues," as the tailless species are called by collectors, are European; whilst the tailed species are more frequent in Asia and the Asiatic islands. About a dozen species, belonging to both groups, have been received from Australia.

The Caterpillars of such species as have been observed feed upon leguminous herbs, such as *Trifolium*, *Lotus*, *Onobrychis*, *Medicago*, &c. The *Chrysalis* is generally attached to the stem of the plant: but occasionally this state is passed beneath the surface of the earth.

LYCÆNA.

1. *LYC. PALEMÓN* *Cramer, Pap. pl. 390. f. E. F. (Papilio P.).*
South Africa. B. M.
2. *LYC. THIUS* *Hübner, Zutr. f. 743, 744. (Hyreus T.).*
Brazil.
3. *LYC. LINGEUS* *Cramer, Pap. pl. 379. f. F. G. (Papilio L.); Godart,*
Enc. M. ix. p. 656.; Boisduval in Delegorgue, South
Africa, p. 588.
Cape of Good Hope, Amazoulou. B. M.
4. *LYC. ERICUS* *Fabricius, Ent. Syst. iii. pt. 1. p. 281. (Hesperia*
E.); Godart, Enc. M. ix. p. 656.
India.
5. *LYC. DEMOCRITUS* *Fabricius, Ent. S. iii. pt. 1. p. 285. (Hesperia*
D.); Godart, Enc. M. ix. p. 656.
East India.
6. *LYC. NYSEUS* *Guérin in Delessert, Souv. Voy. Inde, p. 78. t. 22.*
f. 1. 1 a.
Pondicherry. B. M.
7. *LYC. ROXUS* *Godart, Enc. M. ix. p. 659. (Polyommatus R.);*
Horsfield, Cat. Lep. E. I. C. 70. t. 2. f. 4. 4 a.—4 f.
Java. B. M.
8. *LYC. ROSIMON* *Fabricius, Mant. Ins. ii. p. 71. (Papilio R.);*
Godart, Enc. M. ix. p. 658.; Horsfield, Cat. Lep. E. I.
C. p. 71.
Papilio Corydon *Cramer, Pap. pl. 340. f. C. D. E.*
India, Java, Ceylon, Silhet. B. M.
9. *LYC. NARA* *Kollar in Hugel's Reise d. Kaschmir, p. 421.*
Mussooree, Himalaya.
10. *LYC. THEOPHRASTUS* *Fabricius, Ent. Syst. iii. pt. 1. p. 281.*
(Hesperia T.); Godart, Enc. M. ix. p. 658.; Horsfield,

Cat. Lep. E. I. C. p. 73.; Lucas, Expl. Alger. Lep. pt.
1. f. 6.; Gerhard, Lycæn. pl. 11. f. 4.
Lycæna Psittacus *Fridv.; Herr.-Sch. Suppl. Hübner. t. 48.*
f. 220—223.; Gerhard, pl. 11. f. 3.
India, North-West and South Africa, Crete, Turkey. B. M.

11. *LYC. EMOLUS* *Godart, Enc. M. ix. p. 656. (Polyommatus E.);*
Boisduval in Delegorgue, S. Afr. App. p. 588.
Bengal, Amazoulou.
12. *LYC. STRABO* *Fabricius, Ent. Syst. iii. pt. 1. p. 287. (Hesperia S.);*
Godart, Enc. M. ix. p. 656.; Boisduval, Voy. Astrolabe,
Ent. i. p. 88. (Catochrysops S.).
Australasia and adjacent islands.
13. *LYC. PARRHASIUS* *Fabricius, Ent. Syst. iii. pt. 1. p. 289. (Papilio*
P.); Donovan, Ins. India, pl. 45. f. 5.; Godart, Enc.
M. ix. p. 657.; Horsfield, Cat. Lep. E. I. C. p. 86.
India, Java.
14. *LYC. PANDAVA* *Horsfield, Cat. Lep. E. I. C. p. 84.*
Java.
15. *LYC. MALAYA* *Horsfield, Cat. Lep. E. I. C. p. 70.*
Java.
16. *LYC. ASTERIS* *Godart, Enc. M. ix. p. 657. (Polyommatus A.);*
Boisduval in Delegorgue, South Africa, App. p. 588.
Cape of Good Hope, Port Natal.
17. *LYC. PLINIUS* *Fabricius, Ent. Syst. iii. pt. 1. p. 284. (Papilio P.);*
Donovan, Ins. India, pl. 45. f. 1.; Godart, Enc. M.
ix. p. 658.; Horsfield, Cat. Lep. E. I. C. p. 72.
India, Java.
18. *LYC. HIPPOCRATES* *Fabricius, Ent. Syst. iii. pt. 1. p. 288.*
(Hesperia H.); Donovan, Ins. India, pl. 45. f. 3.;
Godart, Enc. M. ix. p. 659.
India.

19. *LYC. PANDIA* Kollar in *Hugel's Reise d. Kaschmir*, p. 418. Mussooree, Himalaya.
20. *LYC. ASOKA* Kollar in *Hugel's Reise d. Kaschmir*, p. 419. Mussooree, Himalaya.
21. *LYC. PATALA* Kollar in *Hugel's Reise d. Kaschmir*, p. 419. Mussooree, Himalaya.
22. *LYC. DIDDA* Kollar in *Hugel's Reise d. Kaschmir*, p. 420. Mussooree, Himalaya.
23. *LYC. BALLISTON* Hübner, *Zutr.* f. 229, 230. (*Lampides* B.). Georgia, Florida.
24. *LYC. PHÆOMALLUS* Hübner, *Zutr.* f. 261, 262. (*Zesius* P.). Surinam.
25. *LYC. BÆTICA* Linnaeus, *Syst. N.* ii. p. 789. (*Papilio* B.); *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 69.; *Hübner*, *Eur. Schm. Pap.* f. 373—375.; *Godart*, *Enc. M.* ix. p. 653., *Pap. France*, i. pl. 10. f. 2. and pl. 9. ter f. 4.; *Ochs. Schm. v. Eur.* iv. p. 27.; *Gerhard*, *Lycæn.* pl. 11. f. 1. *Papilio Colutææ Rossi*, *Faun. Etr.* ii. p. 155. Southern Europe, Java, South Africa, Mauritius, Madagascar, Africa, India. B. M.
26. *LYC. ELOREA* *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 194. (*Papilio* E.); *Donovan*, *Nat. Repos.* ii. p. 53. Sierra Leone. B. M. and Mus. Linn.
27. *LYC. CELENO* *Cramér*, *Pap.* pl. 31. f. C, D. (*Papilio* C.). *Papilio Celerio Fabricius*, *Mant. Ins.* ii. p. 66.; *Godart*, *Enc. M.* ix. p. 654.; *Horsfield*, *Cat. Lep. E. I. C.* p. 75.; *Donovan's Drawings in Bibl. Hope, Oxford.* East India, Ceylon, Java, Amboyna. B. M.
28. *LYC. ELPIS* *Godart*, *Enc. M.* ix. p. 654. (*Polyommatus* E.); *Horsfield*, *Cat. Lep. E. I. C.* p. 76. pl. 1. f. 4. East India, Java. B. M.
29. *LYC. ATRATUS* *Cramer*, *Pap.* pl. 365. f. A, B. ? (*Papilio* A.), *Horsfield*, *Cat. Lep. E. I. C.* p. 78. Java. B. M.
30. *LYC. CYTA* *Boisduval*, *Voy. de l'Astrolabe*, *Entomol.* pt. 1. p. 87. (*Catochrysops* C.). New Ireland.
31. *LYC. HOFFMANNSEGHII* *Zeller* in *Ent. Zeit. Stettin*, 1850, p. 312. Portugal.
32. *LYC. IDMON* *Hübner*, *Schm. Eur.* f. 820, 821. (*Papilio* I.). Extra-European.
33. *LYC. BALKANICA* *Freyer*, *N. Beitr.* pl. 421. f. 1, 2. Turkey.
34. *LYC. TELICANUS* *Ochsenh. Schm. v. Eur.* iv. p. 27.; *Hübner*, *Eur. Schm. Pap.* f. 371, 372. 583, 584.; *Godart*, *Enc. M.* ix. p. 655., *Lép. France*, ii. pl. 5. 22. f. 3, 4.; *Gerhard*, *Lycæn.* pl. 11. f. 2.; *Freyer*, *N. Beitr.* pl. 56. *Papilio Beticus Esper*, t. 91. *Cont.* 41. f. 2. Southern Europe, Mauritius, Madagascar, Africa. B. M.
35. *LYC. LYBAS* *Godart*, *Enc. M.* ix. p. 655. (*Polyommatus* L.). Timor.
36. *LYC. TAITENSIS* *Boisduval*, *Voy. de l'Astrolabe*, *Entomol.* pt. 1. p. 77. Taiti.
37. *LYC. ETHION* *Boisduval MS.*; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 76. f. 3. Moulmein, Silhet. B. M.
38. *LYC. ÆLIANUS* *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 280. (*Hesperia* Æ.); *Godart*, *Enc. M.* ix. p. 654.; *Horsfield*, *Cat. Lep. E. I. C.* p. 74. pl. 4. f. 1. 1 a. L. & P. *Papilio Alexis Stoll*, *Suppl. Cram. Pap.* pl. 38. f. 3. 3 c. India, Silhet, Timor. B. M.
39. *LYC. KANDARPA* *Horsfield*, *Cat. Lep. E. I. C.* p. 82. India, Java. B. M.
40. *LYC. CNEIUS* *Fabricius*, *Ent. Syst.* v., *Suppl.* p. 430. (*Hesperia* C.); *Horsfield*, *Cat. Lep. E. I. C.* p. 83.; *Godart*, *Enc. M.* ix. p. 657. Northern India, Java. B. M.
41. *LYC. PAVANA* *Horsfield*, *Cat. Lep. E. I. C.* p. 77. Java.
42. *LYC. PLUTO* *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 288. (*Hesperia* P.); *Donovan*, *Ins. India*, pl. 45. f. 2.; *Hombron et Jacquenot*, *Voy. Pole Sud*, *Lép.* pl. 3. f. 9, 10. *Lycæna Nila Horsfield*, *Cat. Lep. E. I. C.* p. 78. Northern India, Silhet, Ceylon, Java. B. M.
43. *LYC. AMYNTAS* *Wien. Verz.* p. 185. (*Papilio* A.); *Fabricius*, *Mant. Ins.* ii. p. 70.; *Hübner*, *Eur. Schm. Pap.* p. 322—324.; *Godart*, *Enc. M.* ix. p. 659.; *Ochsenh. Schm. v. Eur.* iv. p. 26.; *Gerhard*, *Lycæn.* pl. 12. f. 1. (Variety) *Lycæna Polysperchon Ochsenh. Schm. v. Eur.* iv. p. 26.; *Gerhard*, *Lycæn.* pl. 12. f. 2. *Papilio Tiresias Esper*, *Pap. Eur.* pl. 34., *Suppl.* 10. f. 1, 2.; *Hübner*, *Eur. Schm. Pap.* f. 319—321. Var. *Pap. Coretas Wien. Verz.*; *Ochsenheim*; *Gerhard*, *Lycæn.* pl. 11. f. 5. Southern Europe, How-Choo-Fou (China). B. M.
44. *LYC. COMYNTAS* *Godart*, *Enc. M.* ix. p. 660. (*Polyommatus* C.); *Boisd. et Lec. Lép. Am. Sept.* t. 36. f. 6—9. United States, Honduras. B. M.
45. *LYC. FISCHERI* *Eversmann*, *Bull. Mosc.* 1843, p. 537., *Lep. Volg.* p. 58.; *Herr.-Schäff.* *Pap.* f. 218, 219.; *Gerhard*, *Lycæn.* pl. 12. f. 3.; *Freyer*, *N. Beitr.* pl. 440. f. 2. Russia. B. M.
46. *LYC. ISIS* *Drury*, *Ill.* ii. pl. 3. f. 4, 5. (*Papilio* I.). *Papilio Camillus Cramer*, *Pap.* t. 300. f. A, B. *Hesperia Isarchus Fabricius*, *Ent. Syst.* iii. pt. 1. p. 316.; *Godart*, *Enc. M.* ix. p. 679. Western Africa (Doubleday), Sierra Leone (Drury), Timor (Godart). B. M.
47. *LYC. GABINUS* *Godart*, *Enc. M.* ix. p. 659. (*Polyommatus* G.). Brazil. ?
48. *LYC. MYCELUS* *Cramer*, *Pap.* pl. 282. f. F. G. (*Papilio* M.); *Godart*, *Enc. M.* ix. p. 659. West Coast of Africa.
49. *LYC. LACTURNUS* *Godart*, *Enc. M.* ix. p. 660. (*Polyommatus* L.); *Boisduval*, *Voy. de l'Astrolabe*, *Entomol.* i. p. 77. Timor.

50. **LYC. PHIDIAS** *Fabricius, Ent. Syst.* III. pt. 1. p. 286. (*Hesperia* P.); *Godart, Enc. M.* IX. p. 661.
India.
51. **LYC. BOCHUS** *Cramer, Pap.* pl. 391. f. C, D. (*Papilio* B.); *Godart, Enc. M.* IX. p. 661.
Ceylon (*Cramer*).
52. **LYC. CLYTON** *Cramer, Pap.* pl. 67. f. F. G. (*Papilio* C.); *Godart, Enc. M.* IX. p. 679.
East India.
53. **LYC. CASSIUS** *Fabricius, Mant. Ins.* II. p. 82. (*Papilio* C.); *Cramer, Pap.* t. 23. f. C, D.; *Godart, Enc. M.* IX. p. 679.; *Swainson, Zool. Ill.* 2d series, pl. 133.
Brazil, Honduras.
54. **LYC. NUMERIUS** *Stoll, Suppl. Cramer, Pap.* pl. 38. f. 7. 7 G. (*Papilio* N.).
Surinam.
55. **LYC. AKASA** *Horsfield, Cat. Lep. E. I. C.* p. 67. pl. 1. f. 1. 1 a. (*Polyommatus* A.).
Java.
56. **LYC. PUSPA** *Horsfield, Cat. Lep. E. I. C.* p. 67. (*Polyommatus* P.).
East India, Ceylon, Java. B. M.
57. **LYC. LADON** *Cramer, t. 270. f. D. E.* (*Papilio* L.); *Godart, Enc. M.* IX. p. 677.
South Africa. B. M.
58. **LYC. PHILIASUS** *Linnaeus, Syst. Nat.* II. p. 790. (*Papilio* P.); *Fabricius, Mant. Ins.* II. p. 83.; *Godart, Enc. M.* IX. p. 674.
Algeria.
59. **LYC. JESOUS** *Guérin in Lefebvre, Voy. Abyssin.* pl. 11. f. 3, 4.
Abyssinia.
60. **LYC. DUPONCHELI** *Godart, Enc. M.* IX. p. 677. (*Polyommatus* D.); *Boisduval, Voy. de l'Astrolabe, Ent.* I. p. 82.
Timor, Papua, Bengal, Java, Amboyna.
61. **LYC. DUMENILI** *Godart, Enc. M.* IX. p. 677. (*Polyommatus* D.).
Antilles, Timor. ?
62. **LYC. HARALDUS** *Fabricius, Mant. Ins.* II. p. 82. (*Papilio* H.); *Godart, Enc. M.* IX. p. 677.
East India.
63. **LYC. LAJUS** *Cramer, Pap.* pl. 319. f. D. E. (*Papilio* L.).
Hesperia Cajus *Fabricius, Ent. Syst.* III. pt. 1. p. 296.; *Godart, Enc. M.* IX. p. 701.
Northern India. B. M.
64. **LYC. LUCIA** *Kirby, Faun. Bor. Am.* t. 3. f. 8, 9. (*Polyommatus* L.).
Martin's Falls, Albany River, Hudson's Bay. B. M.
65. **LYC. PSEUDARGIOLUS** *Boisd. et Lec. Lép. Am. Sept.* t. 36. f. 1—5.
United States, Ohio. B. M.
66. **LYC. ARGIOLOUS** *Linnaeus, Syst. N.* II. p. 746. (*Papilio* A.); *Lewin, Brit. Butt.* t. 36. f. 3.; *Ochs. Schm. v. Eur.* IV. p. 25.; *Godart, Lép. France*, I. pl. 11. bis f. a. pl. 11. quart. f. 5.; *H. Schüff. Supp. Hb.* f. 515. var.; *Gerhard, Lycæn.* pl. 13. f. 1.
Hesperia Acis *Fabricius, Ent. Syst.* III. pt. 1. p. 295.; *Hübner, Eur. Schm. Pap.* f. 272—274.
April 1. 1852.
- Papilio* Cleobis *Esper, Eur. Schm.* t. 40., *Suppl.* 16. f. 3. t. 54. *Cont.* 4. f. 4. a. b.
Papilio Thersanon *Bergstr. Nom.* t. 49. f. 5, 6.
Papilio Argyrofontes *Bergstr. Nom.* t. 58. f. 5, 6.
Papilio Argalus *Bergstr. Nom.* t. 60. f. 45.
Germany, England, Lapland. B. M.
67. **LYC. DION** *Godart, Enc. M.* IX. p. 679. (*Polyommatus* D.).
Australasia.
68. **LYC. HYPOLEUCA** *Kollar in Trans. Acad. Vienna*, vol. I. (1849) p. 11.
Southern Persia.
69. **LYC. KOLLARI** *Westw.*
Lycæna caelestina *Kollar in Hugel's Reise d. Kaschmir*, p. 423. (not of Eversmann).
Kaschmir.
70. **LYC. LYGDMUS** *E. Doubleday in Entomologist*, p. 209. (*Polyomm.* L.).
Martin's Falls, Albany River, Hudson's Bay. B. M.
71. **LYC. ARION** *Linnaeus, Syst. Nat.* II. p. 789. (*Papilio* A.); *Lewin, Brit. Butt.* pl. 37.; *Fabricius, Ent. Syst.* III. pt. 1. p. 293.; *Godart, Enc. M.* IX. p. 698., *Lép. France*, I. pl. 11. f. 2. and pl. 11. quart. f. 1.; *Hübner, Eur. Schm. Pap.* f. 254—256.; *H. Schüff. Suppl. Hübner.* f. 517—520.
Papilio Telejus *Bergstr. Nom.* pl. 43. f. 4.
Papilio Telegonus *Bergstr. Nom.* t. 44. f. 2.
Var. Pol. Alcon *Stephens, Ill. H.* I. p. 88. (not of W. V.).
Germany, France, England. B. M.
72. **LYC. EREBUS** *Fabricius, Mant. Ins.* II. p. 72. (*Hesperia* E.); *Godart, Enc. M.* IX. p. 700.; *Ochs. Schm. v. Eur.* IV. p. 25.; *Hübner, Eur. Schm. Pap.* f. 260—262.
Papilio Arcas *Borkh. Pap. Eur.* p. 169.
Papilio Nausithous *Bergstr. Nom.* t. 43. f. 1. 3.
Germany, France. B. M.
73. **LYC. CYANECULA** *Eversmann, Bull. Mosc.* 1848, p. 207.
Eastern Siberia.
74. **LYC. EUPHEMUS.**
Papilio Euphemus *Ochsenh. Schm. v. Eur.* IV. p. 25.; *Hübner, Eur. Schm. Pap.* f. 257—259.; *Godart, Enc. M.* IX. p. 699.; *Boisduval, Icones*, pl. . f. .
Papilio Argiades *Fabricius, Mant. Ins.* II. p. 70.
Papilio Diomedes *Naturforsch.* VI. p. 26. n. 14.
Papilio Arctophylax *Bergstr. Nom.* t. 51. f. 1, 2.
Papilio Arctophonon *Bergstr. Nom.* t. 53. f. 7, 8.
Central Europe. B. M.
75. **LYC. ALCON.**
Papilio Alcon *Wien. Verz.* p. 182.; *Ochsenh. Schm. v. Eur.* IV. p. 25.; *Hübner, Eur. Schm. Pap.* f. 263—265.; *Godart, Enc. M.* IX. p. 699., *Lép. France*, II. pl. z. 26. f. 1, 2.
Papilio Arcas *Esper, t. 34., Suppl.* 10. f. 4, 5.
Papilio Telejus *Bergstr. Nom.* t. 43. f. 6.
Papilio Diomedes *Borkhaus. Pap.* I. p. 169.
Papilio Mamers *Bergstr. Nom.* t. 59. f. 1, 2.
Central Europe to Sweden. B. M.
76. **LYC. IOLAS** *Ochsenh. Schm. v. Eur.* IV. p. 144.; *Godart, Enc. M.* IX. p. 700.; *Hübner, Eur. Schm. Pap.* f. 879—882.; *Freyer, Beitr.* pl. 110. f. 2, 3., *N. Beitr.* pl. 97.
Hungary, Dalmatia, Italy. B. M.

77. **LYC. CYLLARUS** *Fabricius, Mant. Ins.* ii. p. 72. (*Papilio C.*); *Ochs. Schm. v. Eur.* iv. p. 25.; *Godart, Léop. France*, i. pl. 11. and pl. 11. quart. f. 3.; *Freyer, N. Beitr.* pl. 271.; *H. Schöff. Suppl. Hübner* f. 516.; *Gerhard, Lycæn.* pl. 15. f. 3.
Papilio Damaetas Wien. Verz. p. 183.; *Hübner, Eur. Schm. Pap.* f. 266—268.
Papilio Dymus Herbst, Pap. t. 309. f. 10, 11.
Papilio Alexis Poda, Mus. Græc. p. 77.
Papilio Phobos Bergstr. Nom. t. 54. f. 7, 8.
Papilio Bronte Bergstr. Nom. t. 56. f. 7, 8.
Continent of Europe, Lapland. **B. M.**
78. **LYC. BELLIS** *Freyer, N. Beitr.* t. 398. f. 1, 2.; *Herr.-Sch. Suppl. Hübner* t. 234—237.; *Gerhard, Lycæn.* pl. 14. f. 1.; *Freyer, N. Beitr.* pl. 398. f. 1, 2.
South of Europe. **B. M.**
79. **LYC. MELANOPS** *Boisduval, Icon. Hist.* t. 17. f. 4, 6. (*Argus M.*); *Gerhard, Lycæn.* pl. 14. f. 4.; *Freyer, Beitr.* pl. 97. f. 2.
Polyomm. Saportæ Hübner-Geyer, Eur. Schm. Pap. f. 922—925. (nec *Duponchel*).
Var. Argus Marchandii Boisduval in Silb. Rev. Ent. ii. p. 121. pl. 1.; *Hübner-Geyer* f. 996, 997.; *Gerhard, Lycæn.* pl. 15. f. 1.
South of Europe, Spain. **B. M.**
80. **LYC. LEFEBVRII** *Godart, Enc. M.* ix. p. 696. (*Polyommatus L.*).
Polyommatus Dolus Hübner-Geyer, Eur. Schm. Pap. f. 793—796. 828, 829.; *Boisduval, Icones, Hist.* t. 15. f. 6—8.; *Gerhard, Lycæn.* pl. 20. f. 4.; *Freyer, Beitr.* pl. 97. f. 3, 4.
Southern Europe, France. **B. M.**
81. **LYC. EPIDOLUS** *Boisduval, Ind. Meth.* p. 13.; *H. Schöff. Suppl. Hübner* Pap. f. 18, 19. 486, 487.; *Gerhard, Lycæn.* pl. 21. f. 1.
Lycæna Menalcas Freyer, N. Beitr. p. 223. f. 2, 3.
France, Constantinople.
82. **LYC. POSEIDON** *Kaden, H. Schöff. Suppl. Hübner. Pap. Append.* i. p. 24.
Asia Minor.
83. **LYC. DAMON** *Fabricius, Mant. Ins.* ii. p. 72. (*Papilio D.*); *Hübner, Eur. Schm. Pap.* f. 275—277.; *Godart, Enc. M.* ix. p. 695., *Léop. France*, ii. pl. x. xxiv. f. 5, 6.; *Gerhard, Lycæn.* pl. 20. f. 3.
Papilio Biton Borkh. Eur. Schm. p. 172.; *Esper, Pap.* i. p. 33., *Suppl.* 9. f. 5. t. 62. *Cont.* 12. f. 4.
Southern and South-Eastern Europe. **B. M.**
84. **LYC. DAMOCLES** *Herr.-Schöff. Suppl. Hübner* f. 214—217.
Lyc. Damone Eversmann, Bull. Mosc. 1841, p. 18. t. 3.; *Freyer, N. Beitr.* t. 386. f. 2.; *Gerhard, Lycæn.* pl. 19. f. 4.
Southern Russia, Turkey. **B. M.**
85. **LYC. IPHIGENIA** *Frivaldszky; H. Schöff. Suppl. Hübner* f. 354.; *Gerhard, Lycæn.* pl. 20. f. 2.; *Freyer, N. Beitr.* pl. 512. f. 1, 2.
Turkey. **B. M.**
86. **LYC. MYRTALE** *Klug & Ehrenberg, Symbolæ Phys.* pl. 40. f. 15, 16.
Syria.
87. **LYC. RIPPERTII** *Boisduval, Icon. Hist.* t. 16. f. 4—6.; *Freyer, Beitr.* t. 133. f. 3.; *Hübner-Geyer, Europ. Schm. Pap.* f. 958—960.; *Gerhard, Lycæn.* pl. 21. f. 3.
South and South-Eastern Europe. **B. M.**
88. **LYC. ADMETUS** *Ochs. Schm. v. Eur.* iv. p. 26.; *Hübner, Eur. Schm. Pap.* f. 307—309.; *H. Schöff. Suppl. Hübner* f. 488, 489.; *Gerhard, Lycæn.* pl. 21. f. 4.; *Godart, Enc. M.* ix. p. 697.
South and South-Eastern Europe. **B. M.**
89. **LYC. DONZELII** *Boisduval, Icon. Hist. Lep.* t. 15. f. 1—3.; *Hübner-Geyer, Eur. Schm. Pap.* f. 955—957.; *Herr.-Schöff. Suppl. Hübner* f. 351, 352.; *Gerhard, Lycæn.* pl. 19. f. 2.; *Freyer, N. Beitr.* pl. 145. f. 2, 3.
South Europe; Sardinia, Norway. **B. M.**
90. **LYC. ALSUS** *Wien. Verz.* p. 184. (*Papilio A.*); *Fabricius, Ent. Syst.* iii. pt. 1. p. 295.; *Lewin, Brit. Butt.* t. 39. f. 3, 4.; *Hübner, Eur. Schm. Pap.* f. 278, 279.; *Godart, Enc. M.* ix. p. 704., *Léop. France*, ii. pl. 326. f. 5, 6.; *Gerhard, Lycæn.* pl. 13. f. 2.
Papilio minimus Esper, 34., *Suppl.* 10. f. 3.
Papilio Pseudolus Borkhaus. Eur. Schm. i. p. 177. 284. pt. 2. p. 235.
Var. Lyc. Alsoides Anderregg; Gerhard, Lycæn. pl. 13. f. 3.
Europe, England. **B. M.**
91. **LYC. SEBRUS** *Boisd. Icon. Hist.* t. 17. f. 1—3.; *Hübner-Geyer, Eur. Schm. Pap.* f. 851—854. (nec 922—925.); *Gerhard, Lycæn.* pl. 14. f. 2.; *Freyer, N. Beitr.* pl. 451. f. 1.
Polyomm. Saportæ Duponchel, Léop. France, t. ; *Treitschke, Schm. v. Eur.* tom. x. pt. 1. p. 65. (nec *Hübner-Geyer*).
South of France, Sardinia, Asia Minor. **B. M.**
92. **LYC. HECATEUS** *Drapiez, Ann. Sc. Phys. Brux.* ii. p. 355. pl. xxx. f. 4, 5. (*Polyommatus H.*).
Hungary.
93. **LYC. LYSIMON** *Ochsenh. Schm. v. Eur.* iv. p. 25.; *Hübner, Europ. Schm.* f. 534, 535.; *Godart, Enc. M.* ix. p. 701.; *Herr.-Schöff. Suppl. Hübner* f. 28, 29.; *Gerhard, Lycæn.* pl. 15. f. 2.
Papilio Oitis Fabricius, Mant. Ins. ii. p. 73. (fem. ?)
Southern Europe, Spain, Portugal, Mauritius, Madagascar, Africa, Bengal, Java, Timor. **B. M.**
94. **LYC. ANISOPHTHALMA** *Kollar in Trans. Acad. Vienna*, i. (1849) p. 10.
Southern Persia.
95. **LYC. PHERETIADIS** *Eversmann, Bull. Mosc.* 1843, p. 536. pl. 7. f. 3 a. 3 b.
Ural Mountains.
96. **LYC. ATYS.**
Papilio Atys Esper, 1. 118. *Cont.* 73. f. 4, 5. (nec *Kinderm. Gerhard.*).
Papilio Pheretes Hübner, Eur. Schm. Pap. f. 495, 496 548, 549.; *Godart, Enc. M.* ix. p. 702., *Léop. France*, ii. pl. v. 25. f. 5, 6.; *Gerhard, Lycæn.* pl. 22. f. 1.
Alps, Lapland. **B. M.**
97. **LYC. PUTLI** *Kollar in Hugel's Reise d. Kaschmir*, p. 422.
Mussooree, Himalaya.
98. **LYC. MAHA** *Kollar in Hugel's Reise d. Kaschmir*, p. 422.
Mussooree, Himalaya.
99. **LYC. ACIS** *Wien. Verz.* p. 182. (*Papilio A.*); *Ochs. Schm. v. Eur.* iv. p. 25.; *Godart, Enc. M.* ix. p. 703.; *Gerhard, Lycæn.* pl. 13. f. 4.
Papilio Cimon Lewin, Brit. Butt. t. 38. f. 6, 7.
Papilio Bizas Bergstr. Nomenkl. t. 48. f. 5, 6.

- Papilio Bizenus* Bergstr. *Nomenkl.* t. 57.
Papilio Argopoeus Bergstr. *Nomenkl.* t. 52. f. 7, 8. t. 61. f. 5, 6.
Papilio Damoetas Bergstr. *Nomenkl.* t. 56.
Papilio Argiolus Fabricius, *Mant. Ins.* II. p. 73.; *Hübner, Eur. Schm. Pap.* f. 269—271.
Papilio Semiargus Borkh. *Eur. Schm.* 172—282. pt. 2. p. 234.
 Continent of Europe, England. B. M.
100. **LYC. CÆLESTINA** Eversmann, *Bull. Mosc.* 1843, p. 535., *Lép. Volg.* p. 44.; *Herr.-Schäffer, Suppl. Hübner.* f. 335—338.; *Gerhard, Lycæn.* pl. 16. f. 1.; *Freyer, N. Beitr.* pl. 445. f. 1, 2.
 Var. *Lycæna tristis* Bischoff; *Gerhard, Lycæn.* pl. 15. f. 4. South Russia, Turkey.
101. **LYC. ENDYMION** Bischoff; *Gerhard, Lycæn.* pl. 16. ff. 2. Turkey.
102. **LYC. EMPYREA** Kindermann; *Gerhard, Lycæn.* pl. 17. ff. 2. — ?
103. **LYC. EURYPILOS** Kinderm.; *Gerhard, Lycæn.* pl. 20. ff. 1. Turkey.
104. **LYC. CYANE** Eversmann, *Bull. Mosc.* 1837, p. 22. and 1841, t. 3. f. 1, 2.; *Freyer, N. Beitr.* pl. 469. f. 1, 2. South Russia.
105. **LYC. MELEAGER** Fabricius, *Mant. Ins.* II. p. 71. (*Papilio M.*); *Godart, Enc. M.* IX. p. 694., *Lép. France*, II. pl. x. 24. f. 1—4.
Papilio Daphnis Wien. *Verz.* p. 182.; *Ochsenh. Schm. v. Eur.* II. p. 26.; *Hübner, Eur. Schm. Pap.* f. 280—282.
Papilio Endymion Wien. *Verz.* p. 182.
 Variety, *Lycæna Stevenii* Freyer, *N. Beitr.* t. 427. f. 1, 2.; *Hübner-Geyer, Schm. Eur. Pap.* f. 994, 995.; *H. Sch. Suppl.* f. 244, 245.
 Germany, Kasan, South Europe. B. M.
106. **LYC. CORYDON** Fabricius, *Mant. Ins.* II. p. 74. (*Papilio C.*); *Hübner, Eur. Schm. Pap.* f. 286—288.; *H. Schäff. Suppl. Hübner.* f. 353. 361. 494, 495. 500, 501. (var. *Hispanica*); *Lewin, Brit. Butt.* f. 36.; *Godart, Enc. M.* IX. p. 693., *Lép. France*, I. pl. 11. bis and pl. 11. ter f. 1.
Papilio Tiphys Esper, t. 51. f. 4.
Pap. Cinnus H. teste *Bdv. Ind. M.* p. 12.
 Var. *Pol. Calæthis* Jermyn, *Butt. Coll. Vade M.* p. 169.
 Continent of Europe, England. B. M.
107. **LYC. DORYLAS** Fabricius, *Mant. Ins.* II. p. 75. (*Papilio D.*); *Hübner, Eur. Schm. Pap.* f. 289—291.; *H. Schäffer, Suppl.* f. 363.; *Godart, Enc. M.* IX. p. 692. (but not of Leach, Stephens, &c.).
Papilio Hylas Borkh. 157. 277. and II. p. 226.
Papilio Argester Bergstr. *Nom.* t. 58. f. 3, 4.
Papilio Thetis Esper, t. 32., *Suppl.* 9. f. 3.
Papilio Golgus Hübner, f. 688, 689.
 Continent of Europe, Sweden. B. M.
108. **LYC. TRITON** Fabricius, *Mant. Ins.* II. p. 74. (*Papilio T.*); *Godart, Enc. M.* IX. p. 693.
 South of Russia.
109. **LYC. POLONUS** Zeller in *Ent. Zeit. Stettin*, 1845, p. 351. (*Polyomm. P.*).
 Posen.
110. **LYC. ADONIS** Wien. *Verz.* p. 184. (*Papilio A.*); *Mant. Ins.* II. p. 75.; *Lewin, Brit. Butt.* t. 38. f. 1—3.; *Hübner, Eur. Schm. Pap.* f. 298—300. 645, 646.; *H. Schäff. Suppl.* f. 248. 698, 699.; *Godart, Enc. M.* IX. p. 691., *Lép. France*, I. pl. 11. bis and pl. 11. ter f. 2.
Papilio Ceronus Hübner, *Eur. Schm. Pap.* f. 295—297.
Papilio Bellargus Esper, t. 32., *Suppl.* 8. f. 3.
Papiliones Venilia, *Salacia*, et *Oceanus*, Bergstr. *Nom.* t. 50. 53.
Papilio Thetis Borkh. *Pap.* I. p. 162.
 Fem. *Papilio Argus* Donovan, *Brit. Ins.* IV. t. 143.
 Var. *Papilio Hyacinthus* Lewin, *Brit. Butt.* t. 78. f. 4. 6.
Polyomm. Dorylas Steph. *Ill. H.* I. p. 90. (not of Fabr.).
 Europe, England. B. M.
111. **LYC. ICARIUS** Esper, *Schm.* t. 99. Cont. 54. f. 4. (*Papilio I.*); *Godart, Enc. M.* IX. p. 695.; *Ochsenheim. Schm. v. Eur.* IV. p. 25. (not of Haworth, Stephens, &c.).
Papilio Amandus Hübner, *Eur. Schm. Pap.* f. 283—285. 752—755.
Polyommatus Agathon Godart, *Enc. M.* IX. p. 695.
 Northern Europe. B. M.
112. **LYC. ESCHERI** Hübner, *Eur. Schm. Pap.* f. 799, 800. 867, 868. (*Papilio E.*).
Polyomm. Agestor Godart, *Enc. M.* IX. p. 690.
 South of France, Switzerland. B. M.
113. **LYC. HESPERICA** Rambur, *Faun. Andal.* pl. 10. f. 1—4. (*Polyommatus H.*); *H. Schäffer, Suppl. Hübner, Pap.* f. 14, 15. 349, 350.
 Spain.
114. **LYC. PANAGÆA** H. Schäff. *Suppl. Hübner, Pap.* f. 490—493.
 Europe.
115. **LYC. LOEWII** H. Schäff. *Suppl. Hübner, Pap.* f. 434—437.; *Zeller in Isis*, 1848, p. 9.
 Europe.
116. **LYC. ACTIS** H. Schäff. *Suppl. Hübner, Pap.* f. 496, 497.
Lycæna Atys Kinderm.; *Gerhard, Lycæn.* pl. 19. f. 3.
 Asia Minor, Turkey.
117. **LYC. MYRRHA** H. Schäff. *Suppl. Hübner, Pap.* f. 508—511.
 Europe.
118. **LYC. BAVIAS** Eversmann, *N. Mém. Mosc.* II. t. 19. f. 3, 4.; *Boisduval, Ind. Meth.* p. 10.; *H. Schäff. Suppl. Hübner.* f. 10, 11. 357—360.; *Gerhard, Lycæn.* pl. 23. f. 1.; *Freyer, N. Beitr.* pl. 511.
 South Russia, Turkey.
119. **LYC. ALEXIS** Wien. *Verz.* 184. (*Papilio A.*); *Hübner, Eur. Schm. Pap.* f. 292—294.; *H. Schäff. Suppl.* f. 246. 362.; *Godart, Enc. M.* IX. p. 690., *Lép. France*, I. pl. 11. bis f. 3. (but not of Fabricius).
Papilio Icarus Borkh. 161.; *Lewin, Brit. Butt.* t. 38. f. 4, 5.; *Esper, Pap.* t. 32., *Suppl.* 8. f. 4.
Papilio Polyphemus Schneider, 250.; *Esper, t. 33., Suppl.* 9.
Papilio Thetis Esper, t. 32., *Suppl.* 8. f. 4. (fem.).
 Var. ? *Thersites Boisduval, Ind. Meth.* p. 11.
Papiliones Candybus, *Candaon*, *Pampholyge*, et *Candiope*, Bergstr. *Nom.* pl. 47, 48, 49.
Papilio Argus Berkenhout, *Syn.* I. p. 129.
Lycæna Dorylas Leach, *Edinb. Enc.* IX. p. 129.
 Var. *Polyomm. Labienus* Jermyn, *Butt. C. Vade N.* 58.
Polyomm. Eros Stephens, *Ill. H.* I. p. 93.
 Var. *Polyomm. Lacon* Jermyn, *op. cit.* p. 168. (2d ed.).
 Var. *Polyomm. Icarus* Stephens, *Ill. H.* I. p. 91.
 Var. *Polyomm. Thestylis* Jermyn, *op. cit.* 2d ed. p. 167.
 Continent of Europe, England. B. M.

120. *LYC. ANTEROS* *H. Schüff. Suppl. Hübn. f. 16, 17, 26, 27.*; *Freyer, N. Beitr. pl. 265. f. 1.*
Balkan.
121. *LYC. BOISDUVALII* *H. Schüff. Suppl. Hübn. Pap. f. 7—9.*
Lycæna Anteros Kindermann; Freyer, N. Beitr. t. 386. f. 3, 4.
Polish Ukraine. B. M.
122. *LYC. EROS* *Ochsenh. Schm. v. Eur. i. ii. p. 42.*; *H. Schüff. Suppl. Hübn. f. 212, 213.*; *Boisduval, Ind. Meth. p. 11.* (not of Stephens, &c.).
Papilio Tithonus Hübner, Eur. Schm. Pap. f. 555, 556.; *Godart, Enc. M. ix. p. 692.*, *Lép. France, ii. p. 193.*
Continent of Europe. B. M.
123. *LYC. EROIDES* *Frivaldszky; H. Schüff. Pap. f. 12, 13.*
Balkan. B. M.
124. *LYC. HYACINTHUS* *Frivaldszky; H. Schüff. Suppl. Hübn. Pap. f. 345—348.*
Turkey. B. M.
125. *LYC. DARDANUS* *Frivaldszky; H. Schüff. Pap. f. 240—243.*; *Gerhard, Lycæn. pl. 17. f. 3.*; *Freyer, N. Beitr. pl. 419. f. 2, 3.*
Turkey, Mount Olympus. B. M.
126. *LYC. CANDALUS* *H. Schüff. Suppl. Hübn. Pap. f. 502, 505.*
Europe.
127. *LYC. CARMON* *H. Schüff. Suppl. Hübn. Pap. f. 506, 507.*
Asia Minor.
128. *LYC. HOPFFERI* *H. Schüff. Suppl. Hübn. Pap. f. 512—514.*; *Gerhard, Lycæn. pl. 21. f. 2.*
Asia Minor.
129. *LYC. LORQUINI* *H. Schüff. Suppl. Hübn. Pap. f. 442—444.*; *Gerhard, Lycæn. pl. 14. f. 3.*
Andalusia.
130. *LYC. AQUILA* *Boisduval, Ind. M. p. 11.*; *H. Schüff. Suppl. Hübn. f. 24, 25, 343, 344.*; *Gerhard, Lycæn. pl. 19. f. 1.*
Lapland.
131. *LYC. PYRENAICA* *Boisduval, Ind. Meth. p. 11.*; *H. Schüff. Suppl. Hübn. Pap. pl. 483—485.*; *Gerhard, Lycæn. pl. 18. f. 2.* (var. *Lorbitulus*?).
Pyrenees.
132. *LYC. ORBITULUS* *Esper, Schm. t. 112. Cont. 67. f. 4.* (Papilio O.); *Godart, Enc. M. ix. p. 688.*, *Lép. France, ii. pl. 25. f. 3, 4.*; *Gerhard, Lycæn. pl. 18. f. 1.*; *Freyer, N. Beitr. pl. 421. f. 3, 4.*
Papilio Meleager Hübner, Eur. Schm. Pap. f. 522—525. 761, 762, 841.
Var. (*Araraticus*) *Bischoff; Gerhard, Lycæn. pl. 18. ff. 3.* (anceps *Anderregg*).
Var. (*Aquila*) *Freyer; Gerhard, Lycæn. pl. 18. f. 4.*
Alps, Pyrenees. B. M.
133. *LYC. RHYMNUS* *Erversmann, Bull. Mosc. 1837, p. 20.*, *N. Mém. Mosc. ii. p. 350. t. xix.*; *H. Schüff. Suppl. Hübn. Pap. f. 22, 23.*; *Gerhard, Lycæn. pl. 12. f. 4.*; *Freyer, N. Beitr. pl. 386. f. 1.*
South Russia. B. M.
134. *LYC. OPTILETE* *Fabricius, Mant. Ins. ii. p. 74.* (Papilio O.); *Hübner, Eur. Schm. Pap. f. 310—312.*; *Freyer, N. Beitr. pl. 451. f. 2, 3.*; *Godart, Enc. M. ix. p. 686.*, *Lép. France, ii. pl. 26. f. 3, 4.*; *Gerhard, Lycæn. pl. 16. f. 4.*
Var. *Papilio Cyparissus Hübner, Schm. Eur. Pap. f. 654—657.*; *Gerhard, Lycæn. pl. 17. f. 1.*
Europe, Lapland. B. M.
135. *LYC. EUMEDON* *Esper, Schm. t. 52. f. 2, 3.* (Papilio E.); *Hübner, Eur. Schm. Pap. f. 301, 302, 700, 701.*; *Godart, Enc. M. ix. p. 697.*, *Lép. France, ii. pl. 25. f. 1, 2.*; *Freyer, N. Beitr. pl. 235. f. 2, 3.*
Papilio Chiron Borkhausen, p. 165, 280.
Papilio Cleon Schneider, p. 242.
Europe, Switzerland. B. M.
136. *LYC. ARTAXERXES* *Fabricius, Ent. Syst. iii. pt. 1. p. 297.* (Hesperia A.); *Lewin, Brit. Butt. t. 39. f. 8, 9.*; *Godart, Enc. M. ix. p. 688.*; *Hübner-Geyer, Schm. Eur. f. 951—954.*; *Freyer, N. Beitr. pl. 235. f. 4.*
Scotland. B. M.
137. *LYC. SALMACIS* *Stephens, Ill. H. iii. p. 235.* (Polyommatus S.); *Westwood & Humphreys, Brit. Butt. pl. 37. f. 1—3.* (var. *Agestis*?).
England.
138. *LYC. TITUS* *Fabricius, Ent. Syst. iii. pt. 1. p. 297.* (Hesperia T.); *Godart, Enc. M. ix. p. 688.*; *Stephens, Cat. Lep. Brit. Mus. i. p. 260.* (Thecla T.).
Strymon Mopsus Hübner, Zutrage, f. 135, 136.; *Boisd. et Leconte, Lép. Anim. Sept. pl. 34. f. 1—6.*
North America, New England, Georgia, Florida, England (Fabricius), Scotland (Godart).
139. *LYC. ACMON* *Westw. MS.*; *Doubl. Westw. & Hewits. Gen. D. Lep. pl. 76. f. 2.*
California. B. M.
140. *LYC. IDAS* *Rambur, Faun. Andal. pl. 10. f. 5, 6, 7.* (not of Linnæus, Lewin, &c.).
Papilio Allous Hübner-Geyer, Schm. Eur. Pap. f. 988—992?
Var. *H. Schüff. Suppl. Hübn. f. 26, 27.*
South of Spain.
141. *LYC. AGESTIS* *Wien. Verz. p. 184.* (Papilio A.); *Hübner, Eur. Schm. Pap. f. 303—306.*; *Godart, Enc. M. ix. p. 689.*, *Lép. France, i. pl. 10. f. 4.*; *Stephens, Ill. H. i. p. 94.*
Papilio Alexis Scopoli, Ent. Carn. p. 179.
Papilio Medon Borkh. Rhein. Mag. i. p. 291.
Papilio Astrarche Bergstr. Nomenkl. t. 49. f. 7, 8.
Papilio Idas Lewin, Brit. Butt. t. 39. f. 1, 2.
Var. ? *Papilio Allous Hübn. f. 988—992.*; *Boisd. Ind. Meth. p. 11.*
Europe, England. B. M.
142. *LYC. PSYLORITA* *Frivaldszky; H. Schüff. Suppl. Hübn. Pap. f. 328, 331.*; *Gerhard, Lycæn. pl. 17. f. 4.*; *Freyer, N. Beitr. pl. 469. f. 3, 4.*
Turkey. B. M.
143. *LYC. TROCHILUS* *Frivaldszky; H. Schüff. Pap. f. 224—226.*; *Gerhard, Lycæn. pl. 16. f. 3.*; *Freyer, N. Beitr. pl. 440. f. 1.*
Turkey. B. M.
144. *LYC. ZEPHYRUS* *Frivaldszky; H. Schüff. Pap. f. 208—211.*
Var. *H. Sch. f. 20, 21.*
Turkey, South of Russia. B. M.

145. **LYC. ARGUS** *Linnaeus, Syst. Nat.* ii. p. 789. ? (Papilio A.); *Hübner, Eur. Schm. Pap.* f. 316—318.; *H. Schöff. Suppl. f.* 247.; *Godart, Enc. M.* ix. p. 684., *Lép. France*, i. pl. 11. f. 1.
Hesperia Amphion Fabricius, Ent. Syst. iii. pt. 1. p. 301.
Papilio Acreon Fabricius, Mant. Ins. ii. p. 76. (fem.).
Papilio Leodorus Esper, t. 30. Cont. 30. f. 1, 2.; *Herbst, Pap.* pl. 316. f. 1—4.; *Gerhard, Lycæn.* pl. 23. f. 3.
Lycæna Idas Zetterstedt, Ins. Lap. p. 913.
Pol. Calliopis Boisduval, Icones; Ind. Meth. p. 11.
Fem. Papilio Idas Linnaeus, Faun. Su. n. 1075.
Var. Pap. Ismenus Borkhausen; Gerhard, Lycæn. pl. 24. ff. 3.
Var. Pap. Lycidas Borkhausen; Gerhard, Lycæn. pl. 24. ff. 4.
Papilio Argyrognomon Bergstr. t. 46. f. 1, 2.
Papilio Argyrocapelus Bergstr. t. 46. f. 3, 4.
Papilio Argyroela Bergstr. t. 46. f. 5, 6.
Papilio Argyrocopus Bergstr. t. 47. f. 7, 8.
Papilio Argrophylax Bergstr. t. 56. f. 3, 4.
Papilio Argyrobias Bergstr. t. 58. f. 7, 8.
Europe. B. M.
146. **LYC. WEBBIANUS** *Brullé, H. N. II. Canaries, Entomol.* p. 93. t. 4. f. 1. (Polyommatus W.).
Canary Islands.
147. **LYC. BELLA** *Bischoff; H. Schöff. Suppl. Hübner, f.* 227, 228.
Brussa, Turkey.
148. **LYC. ÆGON** *Wien. Verz.* p. 185. (Papilio Æ.); *Hübner, Eur. Schm. Pap.* f. 313—315.; *Godart, Enc. M.* ix. p. 685.; *Gerhard, Lycæn.* pl. 23. f. 2.
Papilio Alsus Esper, Pap. Eur. t. 101. *Cont.* 56. f. 3, 4.
Papilio Philononus Borkh. p. 166.
Papilio Argyrotoxis Bergstr. t. 47. f. 3.
Papilio Argyra Bergstr. t. 47. f. 5, 6.
Papilio Argrophalara Bergstr. t. 54. f. 1, 2.
Papilio Argus Linnaeus, Syst. Nat. ii. p. 789. ?; *Lewin, Brit. Butt.* t. 39. f. 5—7.; *Stephens, Illustr. Haust.* i. p. 93.
Var. Lycæna Ægidion Meissner; Gerhard, Lycæn. pl. 23. f. 4.
Europe, England. B. M.
149. **LYC. BATTUS** *Fabricius, Mant. Ins.* ii. p. 76. (Papilio B.); *Hübner, Eur. Schm. Pap.* f. 328—330. 801, 802.; *Gerhard, Lycæn.* pl. 22. f. 2.; *Freyer, Beitr.* pl. 133. f. 2.
Papilio Telephii Esper, Schm. t. 41., *Suppl.* 17. f. 2. t. 94. *Cont.* 49. f. 5.; *Godart, Enc. M.* ix. p. 686., *Lép. France*, ii. pl. 25. f. 7, 8.
Papilio Sedi Fabricius, Mant. Ins. ii. p. 70.
South of Europe. B. M.
150. **LYC. HYLAS** *Fabricius, Mant. Ins.* ii. p. 75. (Papilio H.); *Hübner, Schm. Eur. Pap.* f. 325—327.; *Godart, Enc. M.* ix. p. 687., *Lép. France*, i. pl. 11. bis, 11. ter, f. 5.; *Gerhard, Lycæn.* pl. 22. f. 3.
Papilio Amphion Esper, Schm. t. 53. *Cont.* 3. f. 1.
Papilio Hylactor Bergstr. Nomenkl. t. 47. f. 7, 8.
Papilio Baton Bergstr. Nomenkl. t. 60. f. 6—8.
Var. Papilio Panoptes Hübner, f. 670—673.; *Gerhard, Lycæn.* pl. 22. f. 4.
South Europe, Andalusia. B. M.
151. **LYC. THESPIA** *Linnaeus, Syst. Nat.* ii. p. 791. (Papilio T.); *Godart, Enc. M.* ix. p. 682.
(Female) *Papilio Pitho Linnaeus, Mus. Lud. Utr.* p. 337.
South Africa, Port Natal. B. M.
(Types of both sexes in Mus. Linn.)
152. **LYC. ABENCERRAGUS** *Pierret, Ann. Soc. Ent. France*, 1837, p. 21. pl. 1. f. 7. (Argus A.).
Barbary.
153. **LYC. ACCA** *Westw. MS.; Doubl. Westw. & Hewitts. Gen. D. Lep.* pl. 76. f. 1.
South Africa. B. M.
154. **LYC. POLENA** *H. Schöff. Suppl. Hübner, Pap.* f. 432, 433.
Europe.
155. **LYC. PYLAON** *Fischer, N. Mém. Mosc.* ii. t. 19. f. 5, 6.; *H. Schöff. Suppl. Hübner, Pap.* f. 333, 334. 339, 340.
Sarepta.
156. **LYC. BIAS** *Fabricius, Ent. Syst.* iii. pt. 1. p. 307. 166. (Hesperia B.).
Cayenne.
157. **LYC. ? FLORUS** *Fabr. Ent. Syst.* iii. pt. 1. p. 310. 176. (Hesperia F.); *Jones, Icones*, vi. t. 59. f. 3.; *Donovan, Ins. Ind.* pl. 39. f. 4.
An *Lemonias* ♀ inter *Erycinidas* sp. ?
" In Indiis " (Fabricius).
158. **LYC. ? CEPHUS** *Fabricius, Ent. Syst.* iii. pt. 1. p. 315. 192. (Hesperia C.).
" In Indiis " (Fabricius).
159. **LYC. CATILINA** *Fabricius, Ent. Syst.* iii. pt. 1. p. 304. (Hesperia C.); *Godart, Enc. M.* ix. p. 681.
Papilio Archias Cramer, Pap. pl. 181. f. C. ?
South America.
160. **LYC. CERAUNUS** *Fabricius, Ent. Syst.* iii. pt. 1. p. 303. (Hesperia C.); *Godart, Enc. M.* ix. p. 681.
South-American Islands.
161. **LYC. MINEREUS** *Fabricius, Ent. Syst.* iii. pt. 1. p. 304. (Hesperia M.); *Godart, Enc. M.* ix. p. 681.
South America.
162. **LYC. LIVIUS** *Fabricius, Ent. Syst.* iii. pt. 1. p. 315. 194. (Hesperia L.); *Jones, Icones*, vi. t. 38. f. 1.; *Donovan, Ins. Ind.* pl. 46. f. 4.; *Godart, Enc. M.* ix. p. 825. (Nymphalis L.).
" In Indiis " (Fabricius).
163. **LYC. LACHES** *Fabricius, Ent. Syst.* iii. pt. 1. p. 317. 197. (Hesperia L.); *Jones, Icones*, vi. t. 34. f. 2.
An *L. Livii* ♀ ?).
America ?
164. **LYC. ? IGNITA** *Leach, Zool. Misc.* ii. t. 60. (An *L. Livius Fab.* ?)
Australia. B. M.
165. **LYC. PRIASSUS** *Linnaeus, Syst. Nat.* ii. p. 793. 251. (Papilio P.), *Mus. Lud. Utr.* p. 319.; *Fabricius, Ent. Syst.* iii. pt. 1. p. 323. 224.
" In Indiis " (Fabricius).
166. **LYC. SEBAGADIS** *Guérin in Lefebvre, Voy. Abyssinie*, pl. xi. f. 7, 8.
Abyssinia.
167. **LYC. UBALDUS** *Cramer, Pap.* pl. 390. f. L. M. (Papilio U.); *Godart, Enc. M.* ix. p. 682.
Papilio Artemidas Cramer, text.
Coromandel.

168. *LYC. MESSAPUS* Godart, *Enc. M.* ix. p. 682. (Polyommatus M.).
Cape of Good Hope.
169. *LYC. PIRITHOUS* Linnæus, *Syst. Nat.* ii. p. 790. (Papilio P.);
Godart, *Enc. M.* ix. p. 682.
Barbary.
170. *LYC. OCHSENHEIMERII* Godart, *Enc. M.* ix. p. 683. (Polyommatus O.).
Antilles.
171. *LYC. CISSUS* Godart, *Enc. M.* ix. p. 683. (Polyommatus C.);
Hübner, *Zutr.* f. 811, 812.
Cape of Good Hope.
172. *LYC. DIONISIUS* Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1. p. 82.
New Guinea.
173. *LYC. DIOGENES* Hombron et Jacquenot, *Voy. Pole Sud, Lép.* pl. 3.
f. 7, 8. (Polyommatus D.).
New Guinea.
174. *LYC. CATOCHLORIS* Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1.
p. 78.
Taiti.
175. *LYC. CELINDE* Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1. p. 78.
Dorei, New Guinea.
176. *LYC. DELEGORGUEI* Boisduval in *Delegorgue, Voy. en Afrique*, ii.
p. 588.
South Africa.
177. *LYC. GAMBIVS* Boisduval in *Delegorgue, Voy. en Afrique*, ii. p. 588.
Port Natal.
178. *LYC. POETA* Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1. p. 90.
(Argus P.); Guérin, *Voy. Coquille, Zool.* p. 277.
Polyommatus Cleotas Guérin, *Voy. Coquille, Atlas, Ins.*
n. 18. f. 4.
Port Praslin, New Ireland.
179. *LYC. BATIKELI* Boisduval, *Faune Ent. Madag.* p. 24. pl. 3. f. 5.
Tamatave, Madagascar.
180. *LYC. RABE* Boisduval, *Faune Ent. Madag.* p. 25.
Tamatave, Madagascar.
181. *LYC. TSIPHANA* Boisduval, *Faune Ent. Madag.* p. 26.
Madagascar.
182. *LYC. MALATHANA* Boisduval, *Faune Ent. Madag.* p. 26.
Madagascar.
183. *LYC. TINTINGA* Boisduval, *Faune Ent. Madag.* p. 27.
Madagascar.
184. *LYC. AMARAH* Guérin in *Lefebvre, Voy. Abyssinie*, pl. xi. f. 5, 6.
Abyssinia.
185. *LYC. CELÆUS* Cramer, *Pap.* t. 379. f. K. K. (Papilio C.).
Hesperia Parsimon Fabricius, *Mant. Ins.* ii. p. 77.;
Godart, *Enc. M.* ix. p. 683.
Sierra Leone, Western and Southern Africa. Port Natal.
B. M. (Type in Mus. Banks.)
186. *LYC. HANNO* Hübner, *Samml. exot. Schm.* Band i. pl. —. (Rusticus Ad. H.); Stoll, *Suppl. Cram.* pl. 39. f. 2. 2 b.
Polyommatus Filenus Poey, *Centurie Lép. Cuba*, pl. 13.
Argus Pseudoptiletes Boisd. et Leconte, *Lép. Amér. Sept.*
t. 35. f. 5, 6, 7.
Brazil, West Indies, Cuba. B. M.
187. *LYC. CÆLESTIS* Drapiez, *Ann. Sc. Phys. Brux.* ii. p. 354. pl. 30.
f. 3. (Polyommatus C.).
Van Diemen's Land.
188. *LYC. LABRADUS* Godart, *Enc. M.* ix. p. 680. (Polyommatus L.).
Australia, Port Jackson. B. M.
189. *LYC. XANTHOSPILOS* Hübner, *Samml. exot. Schm.* Band i. pl. —.
(Rusticus Adol. x.).
Lycæna Hübnerii Godart, *Enc. M.* ix. p. 677.
Erina pulchella Swainson, *Zool. Ill.* 2d series, t. 134.
Australia, Timor. B. M.
190. *LYC. SUETONIUS* Fabricius, *Ent. Syst.* iii. pt. 1. p. 320. 213.
(Hesperia S.); Jones, *Icones*, vi. t. 85. f. 3.
"In Indiis" (Fabricius).
191. *LYC. BYZOS* Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1. p. 81.
Port Jackson.
192. *LYC. ERINUS* Fabricius, *Ent. Syst.* iii. pt. 1. p. 302. (Papilio E.);
Donovan, *Ins. New Holland*, pl. 31. f. 3.; Godart, *Enc. M.* ix. p. 680.
New Holland, Botany Bay, Port Jackson.
(Type in Mus. Banks.)
193. *LYC. DAMOETES* Fabricius, *Mant. Ins.* ii. p. 77. (Papilio D.);
Donovan, *Ins. New Holl.* pl. 31. f. 2.; Godart, *Enc. M.* ix. p. 680.; Horsfield, *Cat. Lep. E. I. C.* p. 81.
New Holland, Botany Bay, Java.
194. *LYC. DAMOËUS* Godart, *Enc. M.* ix. p. 681. (Polyommatus D.).
Timor.
195. *LYC. NARCISSUS* Fabricius, *Mant. Ins.* ii. p. 71. (Papilio N.);
Donovan, *Ins. N. Holl.* pl. 30. f. 3.; Godart, *Enc. M.* ix. p. 662.
New Holland. (Type in Mus. Banks.)
196. *LYC. APELLES* Fabricius, *Mant. Ins.* ii. p. 71. (Papilio A.);
Donovan, *Ins. N. Holl.* pl. 30. f. 2.; Godart, *Enc. M.* ix. p. 662.
New Holland. (Type in Mus. Banks.)
197. *LYC. POLYCLETUS* Linnæus, *Syst. Nat.* ii. p. 795. (Papilio P.);
Fabricius, *Mant. Ins.* ii. p. 89.; Clerck, *Icones*, t. 17.
f. 3, 4.; Cramer, *Pap.* pl. 159. f. F. G. (female);
Godart, *Enc. M.* ix. p. 661.
Papilio Epopus Cramer, *Pap.* pl. 363. f. G. H. (male).
Amboyna.
198. *LYC. HYLAX* Fabricius, *Mant. Ins.* ii. p. 77. (Hesperia H.);
Godart, *Enc. M.* ix. p. 701.; Donovan, *Ins. India*,
pl. 46. f. 2.; Horsfield, *Cat. Lep. E. I. C.* p. 66. t. 1.
f. 2. 2 a. (Pithecopis H.).
Moulmein, India, Java. B. M.
199. *LYC. AGRICOLA** Leach MS.; Doubl. Westw. & Hewits, *Gen. D.*
Lep. pl. 76. f. 4. (Lucia A.).
Australia. B. M.

* This insect has been referred by Leach and Doubleday (*List Lep. Brit. Mus.* ii. p. 57.) to the genus Lucia of Swainson, but its general characters are those of Lycæna; the eyes being setose, the palpi very bristly, the intermediate joints of the antennæ long and ringed with white, the fore tibiæ of the males with a small pointed and horny hook at the tip, and the tarsi in the same sex terminated by a horny acute point. The first branch of the postcostal vein of the fore wings, however, is extremely short and transverse, uniting with the costal vein at a considerable distance from the extremity of the latter without being subsequently branched off.

Genus XIII. **DANIS.**DANIS *Fabricius* (*Syst. Gloss.*).DAMIS *Boisduval*, *Guérin*.THYSONOTUS and PEPLIPHORUS *Hübner*.

General characters of *Lycæna*; but with the wings generally broadly fasciated with white, not ocellated beneath, but the hind ones marked beneath with a submarginal row of black spots.

Eyes hirsute.

Antennæ terminated by a long gradually formed club.

Labial Palpi long, first two joints clothed with scaly hairs.

Fore Wings with the postcostal vein three-branched; the third branch arising at a considerable distance beyond the discoidal cell: middle and lower disco-cellular veins very slender; upper one short, distinct.

Hind Wings entire, or scalloped, and with a short tail at the extremity of the first branch of the median vein.

Fore Legs of the female short. Basal joint of the tarsi much thicker than the rest and elongate, spined at the tips of the joints.

I am unfortunately unable to give a satisfactory detailed character of this genus, having only been able to examine a very imperfect female in the collection of the Linnæan Society, from which the accompanying figure was taken. It appears very (perhaps too) close to *Lycæna*, *D. Hylas* resembling the tailed Indian species of that genus. The blue colour of the upper side of the wings is particularly brilliant, and the species inhabit the Moluccas, New Guinea, and the adjacent islands.

DANIS.

1. *D. SEBÆ* *Boisduval*, *Voy. de l'Astrolabe*, *Entomol.* pt. 1. p. 68.; *Guérin*, *Voy. Coquille*, *Zool.* p. 275.; *Hombron et Jacquinet*, *Voy. Pole Sud*, *Lépid.* pl. 3. f. 1, 2.; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 77. f. 4.
Papilio Danis *Cram.* *Pap.* pl. 70. f. E. F. (male).
Papilio Damis *Herbst.*; *Seba*, *Thes.* t. iv. t. 25. f. 5, 6. 12, 13. and t. 37. f. 5, 6.
Erycina Damis *Godart*, *Enc. M.* ix. p. 577. 66.
Polyommatus Damis *Guér.* *Voy. Coquille*, *Atlas*, *Ins.* n. 18. f. 1, 2.
Amboyana, *Rawak*, *Offak*, *Dory*, New Guinea.

2. *D. EPICORITUS* *Boisduval*, *Voy. de l'Astrolabe*, *Entomol.* pt. 1. p. 67. New Guinea.
3. *D. HYLAS* *Cramer*, pl. 363. f. E. F. (*Papilio H.*); *Guérin*, *Voy. Coquille*, *Zool.* p. 275. (*Danis H.*).
Polyommatus Hylais *Godart*, *Enc. M.* ix. p. 654.; *Hombron et Jacq. Voy. Pole Sud*, *Lép.* pl. 3. f. 5, 6. n. 126.
Damis Coritus *Boisd.* *Voy. de l'Astrolabe*, *Entom.* 1re partie, p. 68.; *Hombron et Jacq.* pl. 3. f. 3, 4.; *Guérin*, *Voy. Coquille*, *Atlas*, *Ins.* n. 18. f. 3. (*Polyomm. C.*).
Dory, New Guinea, *Amboyana*.

Genus XIV. **CHRYSOPHANUS.**CHRYSOPHANUS *Hübner*, *Westwood* (*Brit. Butt.*), *Stephens* (*Cat. Brit. Lep.*).POLYOMMATUS *Boisduval*, *H. Schäffer*.LYCÆNA *Stephens* (*Ill.*), *Curtis* (*Guide*).

General characters of *Lycæna*, but with the eyes naked, and the upper side of the wings generally copper-coloured.

HEAD small, hairy.

Labial Palpi obliquely porrected, of moderate length; the basal and middle joints thickly clothed with bristly hairs; terminal joint slender, elongate, nearly naked, of nearly equal length in both sexes.

Antennæ of moderate length, slender; middle joints long, ringed with white; terminated by a distinct elongate-ovate club, not or scarcely spoon-shaped.

Fore Wings somewhat elongated, and more acute at the tip than in *Lycæna*, with the veins and their branches arranged as in that genus; the position of the slender disco-cellular veins, closing the discoidal cell, indicated by a transverse black spot on the under side, which is also generally much ocellated.

Hind Wings ovate, with the anal angle more prominent than in *Lycæna*: the extremity of the first branch of the median vein is also often produced into a slight angle, especially in the males; marked beneath with black spots similar to those of the fore wings.

Fore Legs nearly alike in size in both sexes, scaly. The tibiæ armed with numerous short acute spines, set on irregularly, the tip not produced into a hook. The under side of the tarsi also armed with still more numerous spines; those of the male exarticulate, and terminating in an obliquely curved horny point; those of the female articulated, the first joint about equal in length to all the others united, and rather swollen; terminal joint armed with acute unguis, rather dilated and angulated near the base. Pseudonychia moderate-sized, strongly bifid, the divisions conical, finely setose. Pulvillus large.

Four Hind Legs rather short. Basal joint of the tarsi long, and often swollen in the males. Ungues and their appendages formed as in the fore legs.

CATERPILLAR elongate-ovate, swollen, onisciform, generally finely hairy, head small; feeding upon docks, grasses, and low herbage.

CHRYSLIS short, thick, and entire, with the head-case obtuse.

This group is unquestionably very closely allied to *Lycæna*; but the splendid coppery colours of the upper surface of the wings, the naked eyes, and the very spinose feet, seem to warrant their generic separation. The confusion in the employment of the synonymous terms *Lycæna* and *Polyommatus* for two separate genera has induced me, for reasons set forth in my work on the British butterflies, to adopt Hübner's expressive name for the present group; a plan which has been followed by Mr. Stephens in his recent catalogue of the British species. The species are natives of Europe and North America. The northern parts of India and the Himalayan range have also afforded a species very close to, if not identical with, our small British species *C. Phlæas*; and Mr. E. Doubleday has described a species from New Zealand; whilst *C. Orus* and another allied species inhabit Southern Africa. Some of the species, *C. Helle*, *Hiere*, &c., have the upper side of the wings brilliantly glossed with blue, whilst the female of *C. Xanthe* has the upper side of the wings of an almost uniform brown colour. *L. Phlæas*, one of the most elegant of our small British butterflies, which frequents footpaths, commons, pastures, &c., is one of the most pugnacious of insects, keeping up a constant warfare with its fellows. It is remarkable for the dilated basal joint of the four hind tarsi of the males; a character, I believe, not previously observed.

Papilio Ballus, which has been generally added to the present genus, will form a very distinct subgenus, characterised not only by the peculiarity of its colours (the male having the wings on the upper side brown, with a few small spots of orange near the anal angle of the hind wings, whilst the female has the fore wings orange, with a dentated brown margin, and the hind ones brown, with a large orange patch), but also from its hairy eyes, very bristly palpi, with the last joint minute; the upper discoidal vein of the fore wings branching from the postcostal at a considerable distance beyond the discoidal cell. The legs are also singularly formed, with thickened femora and very short tibiæ, strongly spurred at the tips.

The curious insect figured in our Plate LXXVII. f. 8., under the specific name of *Tarquinius*, must also form another subgenus, from its naked eyes, long, slender, very slightly setose palpi, antennæ gradually clavate, with the joints short and not ringed with white, and the upper discoidal vein of the fore wings arising in the same manner as in *C. Ballus*.

CHRY SOPHANUS.

1. CHR. THOE *Boisduval et Leconte, Lép. Am. Septr.* pl. 38. f. 1—3. (Polyommatus Th.); *Guérin, Iconogr. R. An. Ins.* pl. 81. f. 4, 5. United States, N. America.
2. CHR. EPIXANTHE *Boisduval et Leconte, Lép. Am. Septr.* pl. 38. f. 4, 5. (Polyommatus E.). United States, N. America.
3. CHR. DORCAS *Kirby, Faun. Bor.-Amer. Insects*, p. 299. pl. 4. f. 1. (*Lycæna D.*). Northern parts of America.
4. CHR. PHLÆAS *Linnaeus, Syst. Nat.* ii. p. 793. (*Papilio P.*); *Hübner, Eur. Schm. Pap.* f. 362, 363.; *Godart, Enc. M.* ix. p. 670., *Lép. France*, i. pl. 10. f. 1.; *Gerhard, Lycæn.* pl. 5. f. 4. (var.) pl. 5. f. 3. *Papilio virgaureæ* (female) *Scopoli, Ent. Carn.* p. 181. Var. (female) *Papilio Timæus Cramer, Pap.* t. 146. f. E. F. Var. *turcicus Gerhard, Lycæn.* pl. 5. f. 5. Europe, Nova Scotia, United States, Himalayas. B. M.
5. CHR. VIRGAUREÆ *Linnaeus, Syst. Nat.* ii. p. 793. (*Papilio v.*); *Hübner, Eur. Schm. Pap.* f. 349—351. 884—887.; *Lewin, Brit. Butt.* t. 41. f. 1, 2.; *Godart, Enc. M.* ix. p. 669., *Lép. France*, i. pl. 9. f. 6. pl. 10. f. 4.; *Gerhard, Lycæn.* pl. 6. f. 4. Var. *Lycæna Oranula Freyer, N. Beitr.* pl. 455. f. 1, 2. Europe. B. M.
6. CHR. HIPPOTHOE *Linnaeus, Syst. Nat.* ii. p. 793. (*Papilio H.*); *Hübner, Eur. Schm. Pap.* f. 352—354.; *Godart, Enc. M.* ix. p. 668., *Lép. France*, i. pl. 9. f. 5. pl. 10. f. 3. Europe. B. M.
7. CHR. DISPAR *Haworth, Lep. Britann.* p. 40. (*Papilio d.*); *Curtis, Brit. Ent.* i. pl. 12.; *Westwood & Humphr. Brit. Butt.* pl. 29.; *Hübner-Geyer, Schm. Eur.* f. 966—968. *Papilio Hippothoe Lewin, Brit. Butt.* t. 40. England. B. M.
8. CHR. CHRYSEIS *Fabricius, Mant. Ins.* ii. p. 79. (*Papilio C.*); *Hübner, Eur. Schm. Pap.* f. 337, 338. 355.; *Godart, Enc. M.* ix. p. 667., *Lép. France*, pl. 9. f. 4. pl. 10. f. 2. *Papilio Eurydice Borkh. Schm.* p. 143. *Papilio Hippothoe Esper, Schm.* t. 22. f. 3. (var.); *Gerhard, Lycæn.* pl. 8. f. 1. a, b, c, d. Europe, England. B. M.
9. CHR. CANDENS *H. Schüff. Suppl. Hübner, Schm. Eur. Pap.* f. 229. 231. 355, 356. (Polyommatus C.). Var. *P. Dido Bischoff; Gerhard, Lycæn.* pl. 8. f. 2. Asia Minor.
10. CHR. OTTOMANUS *Lefebvre in Guérin, Mag. Ent.* pl. 19. (Polyomm. O.); *H. Schüff. Suppl. Hübner*, f. 232, 233. 238, 239.; *Brullé, Exp. Morée*, pl. 45. f. 4. 4 a.; *Gerhard, Lycæn.* pl. 6. f. 1. *Lycæna Legeri Freyer, Beitr.* pl. 133. f. 1. Turkey.
11. CHR. ASABINUS *H. Schüff. Suppl. Hübner, Pap.* f. 525—528. (Polyommatus A.); *Gerhard, Lycæn.* pl. 9. f. 3. Turkey.
12. CHR. IGNITUS *H. Schüff. Suppl. Hübner, Pap.* f. 332. (Polyommatus I.); *Gerhard, Lycæn.* pl. 6. f. 2. Mount Ararat, Turkey.

13. CHR. OCHIMUS II. Schöff. Suppl. (Hübner Pap.) f. 523—526. (Polyommatus O.).
Turkey.
14. CHR. KEFERSTEINII Gerhard, Lycæn. pl. 9. f. 4. a, b, c. (Polyomm. K.).
Turkey.
15. CHR. THETIS Klug & Ehrenberg, Symb. Phys. pl. 40. f. 17, 18.
Syria.
16. CHR. ONPHALE Klug & Ehrenberg, Symb. Phys. pl. 40. f. 12, 13, 14. (Polyommatus O.); Boisduval, Sp. gén. Lép. pl. 22. f. 7.
Asia Minor, Smyrna.
17. CHR. HYLLA Fabricius, Mant. Ins. II. p. 59. (Papilio H.); Cramer, Pap. pl. 43. f. B. C.; Godart, Enc. M. IX. p. 671.
Smyrna.
18. CHR. EURYDICE Esper, t. 116. Cont. 71. f. 6, 7. (Papilio E.); Hübner, Eur. Schm. Pap. f. 339—342; Godart, Enc. M. IX. p. 668., Lép. France, II. pl. 22. f. 5, 6; Gerhard, Lycæn. pl. 7. f. 3.
Papilio Euribia Ochsenh. Schm. v. Eur. II. 81.; Freyer, N. Beitr. pl. 163. f. 3, 4.
Variety, Polyommatus euryptera Frib. MS.
South Europe, France, Balkan Mountains. B. M.
19. CHR. HIERE Fabricius, Mant. Ins. II. p. 80. (Papilio H.); Godart, Enc. M. IX. p. 664., Lép. France, II. pl. 23. f. 3, 4.
Papilio Lampetie Wien. Verz. p. 322.; Hübner, Schm. Eur. Pap. f. 356—359.
Papilio Hipponoe Ochs. Schm. v. Eur. II. p. 76.; H. Schöff. Suppl. Hübner Pap. f. 356.
Papilio Helle Borkh. Pap. Eur. p. 146.
Papilio Alciphron Naturforscher, VI. p. 11.
Europe, Polish Ukraine. B. M.
20. CHR. THIERSAMON Fabricius, Ent. Syst. III. pt. 1. p. 313. (Hesperia T.); Esper, Schm. t. 89. Cont. 39. f. 6.; Godart, Enc. M. IX. p. 665., Lép. France, II. pl. 22. f. 7, 8.; Freyer, N. Beitr. pl. 109. f. 3, 4.
Papilio Xanthe Hübner, Eur. Schm. Pap. f. 347, 348.
Central and Southern Europe. B. M.
21. CHR. GORDIUS Schneider, Syst. Besch. p. 230. (Papilio G.); Esper, Schm. t. 30., Suppl. 6. f. 3. a, b.; Hübner, Eur. Schm. Pap. f. 343—345.; Godart, Enc. M. IX. p. 665., Lép. France, II. pl. 23. f. 1, 2,
Southern Europe. B. M.
22. CHR. MAURITANICUS Boisduval; Lucas, Explor. Algér. Lép. pl. 1. ff. 9. (Polyommatus M.); Kefirstein, Ent. Zeit. 1851, p. 224.
Polyommatus undulatus Gerhard, Lycæn. pl. 5. f. 2.
Algeria.
23. CHR. XANTHE Fabricius, Mant. Ins. II. p. 81. (Papilio X.); Godart, Enc. M. IX. p. 666., Lép. France, I. pl. 9. f. 3. pl. 10. f. 1. (not of Hübner).
- Papilio Garbas Fabricius, Mant. Ins. II. p. 81.; Dalman, Pap. Succ. p. —.
Papilio Circe Wien. Verz. p. 18.; Hübner, Eur. Schm. Pap. f. 334—336.; Freyer, N. Beitr. pl. 15. f. 3, 4.
Papilio Dorilas Hufnagel, Berl. Mag. II. p. 68.
Papilio Phocas Esper, t. 35., Suppl. 2. f. 1, 2.
Var. Pol. Canidia Gerhard, Lycæn. pl. 10. f. 2.
Var. Pol. Schmidtii Gerhard, Lycæn. pl. 10. f. 3.
Continent of Europe. B. M.
24. CHR. HELLE Fabricius, Mant. Ins. II. p. 80. (Papilio H.); Hübner, Eur. Schm. Pap. f. 331—333.; Freyer, Beitr. pl. 8., N. Beitr. pl. 157. f. 1, 2.; Godart, Enc. M. IX. p. 667., Lép. France, II. pl. 23. f. 5, 6.
Papilio Amphidamas Esper, t. 58. Cont. 8. f. 4.
Papilio Xanthe Lang, Verz. I. p. 52.
Continent of Europe, Lapland. B. M.
25. CHR. EDNA E. Doubleday in Digffenbach's New Zealand, Appendix, p. 283. (Polyommatus E.); Doubl. Westw. & Hewits. Gen. D. Lep. pl. 76. f. 6.
New Zealand.
26. CHR. ORUS Cramer, Pap. f. 332. f. E. F. (Papilio O.); Godart, Enc. M. IX. p. 672.
Papilio Arcas Fabricius, Mant. Ins. II. p. 80.
South Africa. B. M.
27. CHR. SALUSTIUS Fabricius, Ent. Syst. III. pt. 1. p. 310.; Godart, Enc. M. IX. p. 671. (Hesperia S.); Donovan's Drawings in Bibl. Hope, Oxford.
India.
28. CHR.? CHRYSOMALLUS Hübner, Zutr. f. 301, 302. (Zesius C.).
East India.
29. CHR. CALLIMACHUS Eversmann, Bull. Mosc. 1848, p. 208. (Lycæna C.).
Steppes of the Wolga and Ural, Sarepta, Kasan.
30. CHR. HAFIS Kollar in Denkschr. d. Kais. Akad. d. Wissensch. 1849, I. p. 10. (Polyommatus H.); Gerhard, Lycæn. pl. 10. f. 5.
Thecla Epiphania H. Schöff. Suppl. Hübner Pap. f. 438—441.
Sarepta.
31. CHR.? BALLUS Fabricius, Mant. Ins. II. p. 80. (Papilio B.); Hübner, Eur. Schm. Pap. f. 360, 361. 550.; Godart, Enc. M. IX. p. 673.; Gerhard, Lycæn. pl. 5. f. a, b, c.
South-Western Europe, Spain. B. M.
32. CHR.? TARQUINIUS Fabricius, Ent. Syst. III. pt. 1. p. 319. (Hesperia T.); Boisduval et Leconte, Lép. Am. Sept. p. 128.; Donovan, Ins. Ind. pl. 44. f. 11.; Godart, Enc. M. IX. p. 580. (Erycina T.); Doubl. Westw. & Hewits. Gen. D. Lep. pl. 77. f. 8.
Polyommatus Cratægi Boisd. et Leconte, Lép. Am. Sept. t. 37. f. 1—5.
Nova Scotia. B. M.

Genus XV. ZERITIS.

ZERITIS *Boisduval, Blanchard, E. Doubleday.*CIGARITIS *Boisduval, Lucas.*NAIS *Swainson.*PIIASIS and SCOPTES *Hübner.*

BODY rather robust; wings rather small, often more or less scalloped, especially the hind pair towards the anal angle, and generally copper-coloured above, and marked with silvery spots beneath.

Antennæ rather short, straight, with the middle joints rather short and slightly annulated with white; terminated by a long gradually formed club commencing at about the middle of the antennæ, solid, not spoon-shaped, obtuse at the tip.

Labial Palpi considerably elongated, porrected, clothed beneath with moderately elongated scaly hairs; the terminal joint nearly half the length of the second, moderately slender and finely scaly.

Eyes oval, very convex, naked.

Fore Wings moderate-sized, occasionally slightly scalloped along the apical margin. Postcostal vein with four branches; the first and second arising before the anterior extremity of the discoidal cell; the third and fourth in the space between the cell and the tip of the wing. Upper discoidal vein arising at a very short distance beyond the discoidal cell: the upper disco-cellular obsolete; the middle and lower ones very slender; the latter uniting with the third branch of the median vein at a short distance beyond its origin.

Hind Wings with the outer margin slightly scalloped. The first branch of the median vein and the submedian vein often extended into short tails or angulations (most evident in the males). The upper and lower disco-cellular veins very slender, the former arising just beyond the branch of the postcostal, and the latter uniting with the third branch of the median, just beyond its origin.

Legs moderately short. The tibiæ and tarsi strongly armed with short acute spines. Fore tibiæ of the males truncated at the tip, not hooked. Extremity of the tarsus armed with a single horny curved acute point. Ungues of hind legs (and of the fore legs of the female) small but protruded, acute, rather dilated at the base beneath. Pseudonychia very slender, setose; pulvillus small and narrow.

The species of this African genus, like the *Chrysophani*, are generally distinguished by the copper or orange colour of the upper side of the wings, whilst the under side is generally ornamented with patches of silver. The characters given above have been drawn from *Papilio Thisbe* *Linn.* (*Nais* *Cramer*) and its immediate allies; but *Z. Alpheus* differs in the more elongate-triangular form of the fore wings, entire on the outer margin, and the broad red fascia on the upper side of the wings, the fourth branch of the postcostal vein of the fore wings is also wanting; and some of the species (which have been separated under the name of *Cigaritis*) have the hind wings more decidedly tailed, and appear to approach such species of *Amblypodia* as *Pindarus*, *Vulcanus*, *Oreas*, and *Perion* (which last will also probably prove to be a native of Africa, and not of Surinam. Mr. Swainson's generic name *Nais*, being a transposition of the specific name of the type, is rejected as contrary to the recognized rules of nomenclature.

ZERITIS.

1. ZER. THISBE *Linnaeus, Syst. Nat.* ii. p. 789. (*Papilio* T.); *Fabr. Ent. Syst.* iii. pt. 1. p. 292.; *Godart, Enc. M.* ix. p. 663.
Papilio Nais *Fabricius, Mant. Ins.* ii. p. 71.; *Cramer, Pap.* t. 47. f. D. E.
Nais splendens *Swains. Zool. Ill.* 2d series, pl. 135.
South Africa. B. M.

2. ZER. THERO *Linnaeus, Syst. Nat.* ii. p. 787. (*Papilio* T.); *Fabricius, Ent. Syst.* iii. pt. 1. p. 274.; *Godart, Enc. M.* ix. p. 662.
Papilio Erosine *Fabricius, Mant. Ins.* ii. p. 51.
Papilio Salomoneus *Cramer, Pap.* pl. 341. f. D. E.
Papilio Rumina *Drury, Ill.* i. t. 2. f. 1.
South Africa. B. M.

3. ZER. PALMUS *Cramer, Pap.* t. 341. f. F. G. (*Papilio* P.).
South Africa.

4. ZER.? ALPHÆUS *Cramer, Pap.* pl. 380. f. F. G. (*Papilio* A.); *Fabr. Mant. Ins.* ii. p. 86.; *Godart, Enc. M.* ix. p. 663.;
Doubleday, Westw. & Hewits. Gen. D. Lep. pl. 77. f. 3.
South Africa. B. M.

5. ZER. PROTUMNUS *Linnaeus, Mus. Utr.* p. 340. (*Papilio* P.); *Donovan's Drawings in Bibl. Hope, Oxford.*
Papilio Petalus *Cramer, Pap.* t. 243. f. C. D.; *Godart, Enc. M.* ix. p. 672.
South Africa. B. M. (Type in Mus. Linn.)

6. ZER. *PIERUS* Cramer, *Pap.* pl. 243. f. E. F. (Papilio P.).
Papilio Nycetus Cramer, *Pap.* pl. 380. f. F. G. (var.).
Hesperia Evadrus Fabricius, *Ent. Syst.* III. pt. 1. p. 343.;
Godart, Enc. M. IX. p. 671.
 Cape of Good Hope.
7. ZER. *ZEUXO* Linnæus, *Syst. Nat.* II. p. 789. (Papilio Z.); *Fabricius, Mant. Ins.* II. p. 82.; *Godart, Enc. M.* IX. p. 672.
 Cape of Good Hope. (Mus. Linn.)
8. ZER. *NERIENE* Boisduval, *Sp. gén. Léop.* pl. 22. f. 6.
 Guinea?
9. ZER. *THYRA* Linnæus, *Syst. Nat.* II. p. 789. (Papilio T.); *Fabr. Ent. Syst.* III. pt. 1. p. 314.; *Godart, Enc. M.* IX. p. 663.; *Hübner, Samml. exot. Schm.* Band 1. pl. —.;
Doubl. Westw. & Hewits. Gen. D. Lep. pl. 76. f. 9.
 Var. *Hesperia Suetonius* Fabricius, *Ent. Syst.* III. pt. 1. p. 320.
 Western and Southern Africa. B. M.
10. ZER.? *LARA* Linnæus, *Syst. Nat.* II. p. 791. (Papilio L.); *Fabr. Ent. Syst.* III. pt. 1. p. 315.; *Godart, Enc. M.* IX. p. 675.
- Papilio Iolaus* Cramer, *Pap.* t. 270. f. F. G.
Papilio Gorgias Stoll, *Suppl. Cramer, Pap.* t. 33. f. 5.
 5 D.
 South Africa. B. M.
11. ZER. *SYPHAX* Lucas, *Explor. Algérie, Léop.* pl. 1. f. 8, 9. tom. III. p. 362. (Cigaritis S.).
 Algeria.
12. ZER. *MASINISSA* Lucas, *Expl. Algér. An. Art.* t. 3. p. 364. n. 50. (Cigaritis M.), *Ann. Soc. Ent. France*, 2d ser. 1850, t. VIII. p. 99. pl. 2. f. 11. 2 a. 2 b.
 Algeria.
13. ZER. *ZOHRA* Donzel, *Ann. Soc. Ent. France*, 1847, p. 528. pl. 8. f. 5, 6. (Cigaritis Z.).
 Algeria, Barbary.
14. ZER.? *ACAMAS* Klug & Ehrenberg, *Symbolæ Phys.* pl. 40. f. 7—9. (Thecla A.).
 Syria, Arabia Felix.

Genus XVI. LUCIA.

LUCIA p. Swainson.

General appearance of the small brown-coloured tailless species of *Lycæna*, of dull colours, and with the ocelli on the under side of the wings ill-defined.

HEAD thickly hairy in front.

Eyes very convex, naked.

Antennæ short, rather thick; gradually thickened into a long terminal club, obtuse at the tip; intermediate joints short, not ringed with white.

Labial Palpi rather elongate, clothed beneath with long hairy scales, amongst which are a very few bristles; terminal joint, short, slender.

Fore Wings entire. Apical margin very convex. Postcostal vein with three branches; the third arising halfway between the cell and the tip of the wing. Middle and lower disco-cellular veins very slender, the latter uniting with the third branch of the median vein at a short distance beyond its origin.

Hind Wings rounded, entire, or slightly scalloped. The disco-cellular veins very slender; the upper one arising just beyond the fork of the postcostal vein, and the lower one uniting with the third branch of the median close to its origin.

Legs short, moderately spined on the under side of the tarsi; fore tibiæ not terminated by a curved horny point.

Lucia was proposed by Mr. Swainson as one of his five subgenera of the genus *Polyommatus**; but, although he only assigned three species to the group, two of them differed from the type in the formation of their antennæ, agreeing, in fact, not only in this but other

* The five subgenera of which Mr. Swainson conceived the genus *Polyommatus* to consist are: 1. our *Chrysophanus* (or the Coppers, *Lycæna Swainson*); 2. our *Lycæna* (or the Blues, *Polyommatus* proper *Swainson*); 3. *Erina Swainson*, *Hesperia Erinus* *Fabr.*, *Lycæna ignita* *Leach*, and a few other Australian species which we have not regarded as distinct from *Lycæna*; 4. *Lucia Swainson*; and 5. *Nais Swainson* (our *Zeritis*). These groups are arranged in a circle, in accordance with Mr. Swainson's ordinary fanciful notions of analogy; and hence the fact of two of the *Lucia* having one kind of antennæ, whilst the type has the same organs differently constructed, is regarded as a proof of the soundness of the group termed *Lucia*. If, however, *Agricola*, *Erinus*, *ignita*, &c., are to be separated from *Lycæna*, it will be necessary to establish a much greater number of groups of equal rank with those which Mr. Swainson has given.

characteristic particulars with the terminal species given above as belonging to the genus *Lycæna*. The type, *L. limbaria*, is a native of Australasia; and I have found it necessary to add to the genus the Ceylonese insect represented in our Plate LXXVI. f. 5., placed by E. Doubleday (*List. Lep. Brit. Mus.* ii. 57.) in the genus *Gerydus* (No. 2809. *Miletus Hübner*), but which entirely disagrees with the typical *Gerydi*, whilst it agrees in all its more material characters with *Lucia limbaria*, the antennæ being very short, with the club gradually formed, and with the joints short, and not ringed with white, the eyes naked, the legs of the ordinary form, and the post-costal vein of the fore wings with only three branches, the first free. On the under side the wings of this species are dirty whitish coloured, with a number of very slender equidistant irregular undulating brown lines, without ocelli; and the discoidal cell of the fore wings with a small brown dot near the base, and another oval and transverse in the middle.

LUCIA.

1. *L. LIMBARIA* Swainson, *Zool. Ill.* 2d ser. t. 135.

Hesperia Lucanus Fabricius, *antè*, p. 467. n. 13.
Australasia.

B. M.

2. *L. EPIUS* Westwood MS.; *Doubl. Westw. & Hewits. Gen. D. Lep.*
pl. 76. f. 5. (*Gerydus* Ep.)

Ceylon.

B. M.

Genus XVII. MILETUS.

MILETUS Hübner (Verz).

SYMETHA Horsfield.

GERYDUS Boisduval, E. Doubleday.

BODY long, slender. Wings long; fore ones entire, hind ones generally more or less angulated in the middle of the hind margin; under side with irregular obscure undulating markings.

HEAD small, clothed with fine short hairs.

Eyes naked.

Labial Palpi considerably elongated, compressed, narrow, scaly; terminal joint long, more slender, obliquely or vertically porrected.

Antennæ long, slender; joints short, not ringed with white; terminating in a long, slender, and very gradually formed club, not more than half as thick again as the basal portion; tip curved outwardly.

Fore Wings elongate-ovate. Costal margin much arched. Apical margin convex, entire. Postcostal vein with three branches; the first and second arising before the anterior extremity of the discoidal cell, and the third half-way between the cell and the tip of the wing. Upper disco-cellular vein wanting: middle one very slender, varying in its position; arising in *M. Symethus* close beyond the second branch of the postcostal vein, whilst in *M. Zymna* it arises at some distance beyond it, simultaneously with the upper discoidal vein.

Hind Wings ovate, more or less slightly scalloped in the hinder margin towards the anal margin; the middle of the hinder margin being more or less evidently angulated, especially in the female.

Legs rather short, slender, scaly, compressed. The tarsi in all the feet with the basal joint remarkably elongated, widened, and quite compressed; the tarsus in the fore legs of the male being exarticulate, and as long as the femur and tibia united: second, third, and fourth joints in the four hind legs very short, terminal joint small, subovate, notched at its obliquely truncated extremity, with extremely minute unguis.

ABDOMEN elongated.

The remarkable structure of the feet of the type of this genus has not been observed in any other lepidopterous insect, whilst the elongated subovate form of the wings, and the plain style of their colouring, give them an appearance very dissimilar from that of the majority of the species of the present family. With the exception of the veining of the wings, the characters of the genus are carefully represented in Dr. Horsfield's *Descriptive Catalogue*; no description of it, however, appears amongst the species composing the Vermiform Stirps in the list of that work, and in the list of genera it is given as an aberrant one. The arrangement of the veins of the wings entirely agrees, however, with that of the typical *Lycænidae*, and the markings of the under side bear a certain resemblance to those of the *Luciæ* and some of the more aberrant *Lycænæ*. The type is a native of India and Java. The tropical African insect represented in our Plate LXXVI. f. 7. under the name of *Pentila Zymna* must also be referred to the present genus, agreeing with the type in the majority of its characters; its legs are, however, still more slender, and the basal joint of the tarsi, although greatly elongated, is not so broad as in *M. Symethus*. The under side of the wings is of a pale brownish buff colour, the hinder part of the disc of the fore wings white, and the hind wings marked with a number of very slender, scarcely distinct, undulating, whitish strigæ. *Papilio Polycletus* of Cramer, pl. 159. f. F. G., seems to approach very close to the present genus.

MILETUS.

1. *M. SYMETHUS* *Cram. Pap.* t. 149. f. B. C. (*Papilio* S.); *Stoll, Suppl. Cram. Pap.* t. 37. f. 3. 3 C.; *Fabricius, Mant. Ins.* II. p. 69.; *Godart, Enc. M.* IX. p. 675. (*Polyommatus* S.); *Boisduval, Sp. gén. Léop.* pl. 23. f. 2. (*Gerydus* S.).

Symetha Pandu *Horsfield, Cat. Lep. E. I. C.* t. 2. f. 2.; *Boisduval, Voy. de l'Astrolabe, Ent.* I. p. 73. (*Simæthus* P.).

Moulmein, Java, Amboyna, Papou.

B. M.

2. *M. LEOS* *Guérin, Voy. Coquille, Zool.* p. 276., *Atlas*, pl. 18. f. 8. (*Simæthus* L.).

An var. *M. Symethi*?

Bourou.

3. *M. REX* *Boisduval, Voy. de l'Astrolabe, Entomol.* pt. 1. p. 72. (*Simæthus* R.).

Offack, Dorei.

4. *M. ZYMNA* *Westwood MS.*

Pentila Zymna *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 76. f. 7.

Ashanti.

Genus XVIII. PENTILA.

PENTILA *Boisduval MS.*

LIPTENA *Westwood MS.* (and our Plate LXXVII. f. 5, 6.)

BODY long, slender; wings large, entire, not marked with ocellated spots.

HEAD small.

Antennæ short, slender, very scaly; middle joints rather short, not ringed with white. Club distinct, short, elongate ovate, composed of about ten or twelve joints, subserrated on the outside.

Labial Palpi very minute, almost concealed among the scales of the face, against which they are closely applied, roughly clothed with scales. Basal joint long; second curved, not much longer than the first; third very minute and oval.

Fore Wings large, triangularly ovate, or sub-elongate and more triangular. Costal margin moderately arched; apical margin more or less strongly convex, entire. Postcostal vein four-branched; the first and second branches arising before the anterior extremity of the discoidal cell, the third and fourth branches between the cell and the tip of the wing. Upper disco-cellular arising from the postcostal at about the same distance beyond the second branch as the space between the first and second branches; it is also about equal in length to the same space and oblique: middle disco-cellular short, less oblique; lower one rather longer, nearly transverse and very slender, uniting with the third branch of the median vein at a moderate distance beyond its origin at the spot where the third branch is angulated.

Hind Wings ovate or elongate ovate. Precostal vein distinct, short, and curved. Postcostal branched at a considerable distance from its base; upper disco-cellular short, slender, arising at a short distance beyond the origin of the branch, oblique; lower one nearly transverse, slender, arched, uniting with the third median branch at a moderate distance from its origin.

Fore Legs of the male small, clothed with rough scaly hairs. Femur and tibia of equal length. Tarsus about half the length of the tibia, exarticulate, armed beneath with a few slender spines, and terminated by a small deflexed horny hook. Tibia not hooked at the tip. *Fore Feet* of the female perfect, similar to the

Four Hind Legs, which are short, roughly clothed with scaly hairs, amongst which are a few irregular spines. Tarsi shorter than the tibiae. Basal joint of moderate length. Ungues small but protruded, very acute and curved, dilated at the base within. Pulvillus moderate-sized, thick. Pseudonychia very small, setose.

ABDOMEN elongate.

The species of this genus are natives of tropical Western Africa, and present a very remarkable appearance, reminding us of Geometreidous moths rather than of butterflies, in the peculiarity of their colouring, the large size of the wings, and the slenderness of the

August 1. 1852.

body. The very minute palpi and short rough legs, together with the four-branched postcostal vein of the fore wings, and the presence of a short precostal vein in the hind wings, are further characters of the group.

In selecting the species of this and the preceding genus for illustration, I was led to believe that the insect represented in Plate LXXVI. f. 7. was a species of Boisduval's genus *Pentila*; and as those represented in fig. 5. and 6. of the same plate differed generically from the former, I gave them a new generic name, which must be expunged, as I find that the two latter insects are congeneric with Boisduval's type *Pentila undularis*, and that the former is, in fact, a species of *Miletus* (*Gerydus Boisduval*). The female of *P. Abraxas* (Pl. LXXVII. f. 5.) has the wings more suffused with brown than the male. The under side of *P. Acræa* (Pl. LXXVII. f. 6) is coloured in the same manner as the upper side, except that the black margins of the wings are marked with rows of white spots.

PENTILA.

1. *P. UNDULARIS* Boisduval MS.; *E. Doubleday, List Lep. Brit. Mus.*
II. p. 57.
Congo. B. M.
2. *P. ABRAXAS* Westwood MS. (*Liptena* A.); *Doubl. Westw. & Hewits.*
Gen. D. Lep. pl. 77. f. 5.
Ashanti. B. M.
3. *P. ACRÆA* Westwood MS. (*Liptena* A.); *Doubl. Westw. & Hewits.*
Gen. D. Lep. pl. 77. f. 6.
Ashanti. B. M.

4. *P.?* EVANDER Cramer, *Pap.* pl. 331. f. F. G. (*Papilio* E.); *Godart, Enc. M.* IX. p. 676. (*Polyommatus* E.).
Western Coast of Africa.

Obs.—TINGRA TROPICALIS, described by Boisduval in *Delegorgue's Voy. en Afrique*, II. p. 589, a native of Port Natal and Ashanti (an insect which I have not had an opportunity of examining), may possibly be closely allied to *Pentila*. It is described as resembling *Acræa punctatissima*, a native of Madagascar.

CALLIDULA PETAVIA Hübner (*Verz.* n. 638. *Papilio Petavius* Cramer, *Pap.* pl. 365. f. C. D., *Godart, Enc. M.* IX. p. 676. *Petavia* Sakuni Horsfield *Desc. Cat. Lep. E. I. C.*, pl. 2. f. 1, 1 a—1 f., and our plate 77. f. 7.).

This Javanese insect, referred by Godart to the genus *Polyommatus*, arranged by Hübner at the end of the *Satyridæ*, and given by Dr. Horsfield as one of the normal genera of his vermiform stirps of butterflies (*Lycænida* nob.), with the remark that it is nearly related to *Hesperia*, but not described by the last-named author in the text of his work, belongs to the *Heterocera* or nocturnal *Lepidoptera*, proved not only by the structure of the legs, as represented by Dr. Horsfield, but also by the veins of the wings, which I have been enabled to examine through the kindness of Dr. Horsfield in placing in my hands one of his original specimens.

CLEOSIRIS CATAMITA Boisduval, *Sp. Gen. Lep.* pl. 23. f. 3., and our pl. 77. f. 9. *Tetragonus Catamitus* Hübner, *Zutrage*, f. 653, 654.

This insect, placed by Boisduval between our genera *Lycæna* and *Miletus*, is also one of the *Heterocera*. The veins of its wings (very inaccurately represented in Boisduval's figure) are arranged almost as in *Callidula*, and the hind tarsi have two long spurs in the middle.

CLEIS POSTICALIS Guérin, *Voy. Coq.* pl. 18. f. 5.,

Represented amongst the diurnal *Lepidoptera* after the *Lycænida*, also belongs to the *Nocturna*, forming with two other species Boisduval's genera *Damias* (*Voy. Astrolabe*, pt. 1. p. 259.); apparently also allied to *Callidula*, as Boisduval observes that "sans les antennes et les pattes on prendrait les insectes de ce genre pour des *Diurnes* voisins du *Papilio Petavius* des auteurs."

Family XV. HESPERIDÆ.

HESPERIDÆ *Leach.*

PLEBEII URBICOLÆ *Linnaeus.*

HESPERIA *Latreille.*

PAPILIONES GENTILES ASTYCI *Hübner.*

INSECTS of small, or moderate, size.

BODY generally very robust: colours mostly obscure.

HEAD often very broad, generally with a tuft of hairs at the base of the antennæ.

Eyes large and very prominent; always naked.

Antennæ wide apart at the base; often terminated by a thick club, or a strong curved hook.

Labial Palpi short, broad, closely compressed against the face; densely squamose. Terminal joint often very minute, naked, and conical.

Spiral Tongue (Maxillæ) very long.

WINGS rather small in size, and often marked with vitreous spots. *Fore Wings* always with four branches to the postcostal vein; all arising before the extremity of the discoidal cell, the fourth extending to the tip of the wing, and the extremity of the postcostal itself below the tip. The upper discoidal vein arising just beyond the base of the fourth branch. Disco-cellular veins slender. The first branch of the median vein often arising nearer the base of the wing than usual.

Hind Wings with the anal portion of the outer margin often produced into a lobe or tail. Anal margin folded. Costal vein forming, with the base of the postcostal, a small cell at the base of the wing, emitting a short spur, which is directed towards the base of the wing. The branch of the postcostal is united with the third branch of the median by two very slender disco-cellular veins, straight, or sometimes considerably angulated (more or less imperfectly closing the discoidal cell), from which arises a very slender, and often indistinct, discoidal vein; the space at the margin of the wing, between the extremity of the postcostal vein and of the third branch of the median vein, being scarcely longer than that between the extremity of the second and third branches of the median vein.

LEGS. *Fore Legs* perfect. Tibiæ short, generally with a horny flattened spur on the inside beyond the middle; generally concealed by long hairs.

Middle Legs with a pair of spurs at the tip of the tibiæ.

Hind Legs generally with a pair of spurs below the middle, and another pair at the tip. Tarsi long, with rows of short spines beneath. Ungues and their appendages minute; the claws much bent, broad at the base, with a deep notch in the middle. Paronychia bifid; the outer divisions very slender and setose; the inner small and much broader.

CATERPILLAR moderately long, cylindrical, fleshy, not spined; with a large head and narrow neck; generally living in rolled-up leaves.

CHRYsalis entire, generally without angular prominences; attached by the tail, and girt round the middle, sometimes enclosed in a slight silken cocoon among the rolled leaves.

This is a family of butterflies, generally of small size and obscure colours, very numerous in species; and which, from their peculiar structure, constitute a distinct division amongst the Diurnal Lepidoptera, to which Dr. Boisduval has applied the name of *Involuti*, from the circumstance of the caterpillars generally enclosing themselves in a rolled-up leaf, and thus, as well as in several other respects, approaching the nocturnal species. The chief of these characters consists in the possession of a pair of spurs in the middle of the hind

tibiæ, which are not found in any other butterflies.* The simple structure of the chrysalis, and the habit of the caterpillar of rolling up leaves, are also peculiarities at variance with the general characters of the Diurna, and agreeing with the nocturnal species.

In some species, as we are informed by Mr. Swainson, all the wings lie in a horizontal position when the insect is at rest (*Tamyris Zeleucus Fabr. Swains. Zool. Ill. v. i. pl. 33.*); but, in most of the species, the hind wings are horizontal, whilst the fore ones are more or less perpendicular. It is on this account that Dr. Agassiz (*Smithsonian Contrib. to Knowledge, ii.*) regards the Hesperidæ as a lower type than the majority of butterflies (which, on account of their resting with their wings in a position opposed to that which they occupied in the chrysalis state, are considered not only as higher than the rest of the Lepidoptera, but also than all other insects). The veins of the wings offer several remarkable particulars: thus, the four branches of the postcostal vein of the fore wings arise at nearly equal distances apart, before the anterior extremity of the discoidal cell, closely followed by the two discoidal veins and the branches of the median vein; the whole forming a series radiating from the discoidal cell in so regular a manner, that Dr. Herrick Schäffer regards this group as the type of the Diurnal Lepidoptera on this account. The more or less obsolete character of the discoidal vein of the hind wings, and the arrangement of the basal portion of the veins, are further peculiarities of the family.

The Hesperidæ are generally of small, or but moderate, size; their colours are generally obscure, and their wings are often marked with transparent spots. The peculiar distinction indicative of the sexes, afforded by the structure of the fore legs in many of the preceding groups, is here wanting; and it is consequently difficult, except in those species where the wings afford sexual distinctions, to determine the sexes of different individuals. In some groups, however, the fore margin of the fore wings is recurved in the males, the enclosed space being thickly clothed with pale-coloured down (*H. Rhetus Latr., costalis W., malvarum, Tages, &c.*; in other species (*Ismene (Edipoda, &c.)*), the males have a large velvety patch near the base of the fore wings; and, in others in the same sex, there is a thickened and oblique ridge on the middle of the fore wings (*H. Linea, Comma, Sylvanus, &c.*). In others (*H. Zeleucus, &c.*), the males have the club of the antennæ linear and obtuse, whilst it is more slender and attenuated in the females.

The species are very numerous: probably not fewer than six or seven hundred exist in our collections; and of this number at least half are natives of tropical America. Many fine species occur in India, and but few in Australia, Africa, and Europe. In the last-named quarter of the globe there are scarcely more than thirty species. Their flight is extremely rapid, the eye being scarcely able to follow their movements. They delight in the hottest sunshine; and their small, powerful wings and robust bodies enable them to rival the hawk moths in swiftness. Their peculiar flitting movements have caused them to be named "skippers" by our English collectors. By Dr. Horsfield they were united with the Erycinidæ into one of the five stirpes of butterflies, and by Latreille the genus *Urania* was added to them to form the second great division of the butterflies. A glance at the characters of the Erycinidæ given above, and an examination of the arrangement of the veins of the wings of the *Uranie*, will show the impropriety of both these plans of arrangement.

Reaumur (*Mém. i. pl. 11.*), Stoll, Hübner, Abbott and Smith, Poey (*Centur. des Lép. de Cuba, pl. 4.*), and Swainson (*Zool. Ill. v. i.*), &c., have represented the transformations of various species of the family, which exhibit an uniform type in the form of the larvæ, which are often clothed with numerous short hairs. The chrysalis is elongated, and generally smooth and finely hairy. It is attached by the tail, and girt round the thorax by a transverse thread, the transformation being effected under the cover of a leaf. The head case, in the chrysalides of a few of the species, is pointed.† The transformations of *H. Tityrus* have formed the subject of a remarkable memoir by Professor Agassiz, above referred to. M. Boisduval observes, respecting the habits of certain species in the larva state: "Nous connaissons plusieurs *Hesperia* qui vivent dans l'intérieur des racines" (*Icon. Hist. Lép. d'Eur. ii. p. 173. note*). Of some of the European species there are two broods in the course of a year.

The species are very closely allied together; and many of them, which have a wide geographical range, appear to be subject to considerable variation. According to M. Rambur (*Faune Entomol. de l'Andalousie*), good specific distinctions exist in the structure of the male organs of generation of nearly allied species. This character is, however, of such difficult application, as not to be practically available.

As regards the distribution of the species into subordinate groups or genera, we are also met by equal difficulties; for instance, with reference to our indigenous species, the antennæ in *H. Malvæ* (or *Alveolus*) and *Tages* have the club differently formed, and the position of the wings in repose is different, although they agree in the folded costa of the fore wings of the males, and in the curved clava of the antennæ. Again, the club of the antennæ differs in its form in each of the British species composing the genus *Pamphila*, in Mr. Stephens's Illustrations, whilst, if we refer to the exotic species, our difficulty is still more increased. The form of the wings, the arrangement of the markings and vitreous spots, where present, the form of the club of the antennæ, and of the labial palpi, are the chief characters employed by Hübner in his *Verzeichniss bekannter Schmetterlinge*, Latreille and Boisduval, Swainson and Zeller (*Isis*, 1849), whilst Dr. Herrick Schäffer's classification of the European species (*Syst. Bearb.*) is founded entirely on the coloration and markings of the wings, all the species being referred to the single genus *Hesperia*.

Admitting these difficulties, and finding it impossible to propose a satisfactory generic distribution of the entire family, or to refer the numerous described species to their legitimate position in the family, I am under the necessity of confining their generic elaboration to the description of some of the more evident groups, and to an enumeration of the species, which I shall precede by an abstract of the classifications proposed by Hübner and Latreille.

Hübner divides the Hesperidæ (*Astyci*) into eight families, as follows:

* Speyer, in the *Isis*, 1839, p. 91., notices that some of the species want this character; and Erichson's *Jahrbericht* for 1839, p. 75., mentions *H. Paniscus* and *Sylvius*, with the American group represented by *Peleus* and *Gentius*, as well as *Nelus*, *Talaus*, and *Hesychius*, as being deprived of the middle spurs. The same circumstance also takes place in the charming *Ph. Celeste* (pl. 78. f. 4.) and some allied species. The Cape of Good Hope *H. Metis*, which is so closely allied to *Paniscus*, possesses them, and in *H. malvæ* they are short but distinct, although only found on denuding the tibia. I possess, however, a very remarkable new species from Mexico, of large size, in which all the legs appear to be destitute of spurs.

† The chrysalides of the species observed by Stoll and Agassiz have the body girt in the middle with transverse threads, but Lewin (*Brit. Ins. pl. 46. f. 7.*) represents that of the spotted skipper without the transverse girth. It is impossible to determine from Hübner's figure whether the pupa of *H. linea* in its slender silken cocoon is girt or not, just as it is equally impossible to ascertain whether the pupa of *Parnassius Apollo*, also figured in its cocoon of loose threads by the same author, is girt or not. As the pupæ of the *Papilionæ*, and that of the genus *Thais*, as represented by Hübner, are clearly girt, I apprehend the same takes place in *Doritis*, and that *Hesperia linea* also forms no exception to the general character of the family; and, consequently, that there is no fourth type of pupæ enclosed in a cocoon without any brace, as suggested by Mr. Swainson (*Nat. Arrangement of Insects*, p. 76.).

- I. **CELEBRES.** Hind wings with the anal margin remarkably elongated; divided into four coitus or subgenera.
1. *Pyrrhopyge*. * Types *P. Bixæ* (*Mænæs Cr.* p. 199. f. C. D.); *Phidias* (*Acastus Cr.* p. 41. f. C. D. p. 199. f. E.); *Amyclas Cr.* p. 199. f. F. &c.
 2. *Phocides*. *P. Palemon Cr.* p. 131. f. F.; *Alardus Stoll*, p. 39. 77. f. F. &c.
 3. *Astraptus*. *P. Corytus Cr.* p. 100. f. C.; p. 245. f. E.; *Pertinax Stoll*, p. 35. f. 2.; *Fuligator Cr.* p. 284. f. A. B.; *Aulestes Cr.* p. 283. f. E. F. G. &c.
 4. *Cecrops*. *Neis Hübn. Zutr.* t. 519, 520.; *Zarex Hübn. Zutr.* p. 183, 184.
- II. **FORTES.** Hind wings considerably elongated from the anal angle; divided into three subgenera.
1. *Telegonus*. *Talus Cr.* p. 176. f. D.; *Phocus Cr.* p. 162. f. F. &c.
 2. *Goniurus*. *Proteus Linn. Cr.* p. 260. f. D. E.; *Simplicius Stoll*, p. 39. f. 6, 6 E. &c.
 3. *Proteides*. *Mercurius Fab.* (*Idas Cr.* p. 260. f. A. B.); *Exadeus Cr.* p. 260. f. C.; *Assaricus Cr.* p. 261. f. F. G. &c.
- III. **FORMALES.** Wings of the ordinary form, the hind ones only elongated at the anal angle; divided into nine subgenera.
1. *Thracides*. *Phidon Cr.* p. 245. f. F. G.; *Salus Cr.* p. 68. f. E.
 2. *Epargyreus*. *Prodicus Stoll*, p. 33. f. 6.; *Clarus Cr.* p. 41. f. E. F. (*Tityrus Fab.*); *Orchamus Cr.* p. 155. f. E. F. &c.
 3. *Calliades*. *Florestan Cr.* p. 391. f. E.; *Dubius Cr.* p. 354. f. B. C.; *Chromus Cr.* p. 284. f. E.
 4. *Talides*. *Sinon Cr.* p. 342. f. D. E.; *Broteas Cr.* p. 283. f. C. D.; *Ramuses Cr.* p. 342. f. C. &c.
 5. *Telemiades*. *Avitus Cr.* p. 354. f. D.; *Epicalus Cr.* p. 354. f. E.; *Salatis Cr.* p. 393. f. E.
 6. *Celenorrhinus*. *Corbulo Cr.* p. 354. f. A.; *Elegius Cr.* p. 354. f. H.; *Cebrenus Cr.* p. 178. f. G. &c.
 7. *Colpodes*. *Ladon Cr.* p. 284. f. G.; *Ethlius Cr.* p. 392. f. A.
 8. *Gegenes*. *Pygmaeus Hübn. Pap.* p. 458. &c.
 9. *Phlebodes*. *Pertinax Cr.* p. 354. f. C.; *Æcas Cr.* p. 343. f. A. B. (*Saturnus Fab.*).
- IV. **VETERES.** All the wings obscurely coloured with undulating strigæ; divided into four subgenera.
1. *Achlyodes*. *Busiris Cr.* p. 261. f. A. B.; *Thraso Hübn.* &c.
 2. *Antigonus*. *ustus Hübn.*; *erosus Hübn.* &c.
 3. *Nisoniades*. *Bromius Stoll*, p. 8. f. 1 C. 1 D.; *Mimas Cr.* p. 52.; *Tages Linn.*; *Ophion Stoll*, &c.
 4. *Tagiades*. *Japetus Cr.* p. 365. f. E. F.; *Paulinus Cr.* p. 391. f. G. H.
- V. **VULGARES.** Wings black, with clear spots; divided into three subgenera.
1. *Pyrgus*. *Syrictus Fab.* (*Orcus Cr.* p. 334. f. I.); *Orcus Cr.* p. 334. f. K. L.; *Malvæ Linn.* (*Alveolus Hübn.*); *Vindex Cr.* &c.
 2. *Tharops*. *Menander Cr.* p. 334. f. C. D.; *Thersander Cr.* p. 335. f. A. B. [*Erycinidæ*].
 3. *Aetheus*. *Archytas Stoll*, p. 5. f. F.; *Meris Cr.*; *Pretus Cr.*
- VI. **CAUTI.** Wings with transparent spots on a variegated ground; hind wings subdentate; divided into five subgenera.
1. *Erycides*. *Pigmalion Cr.* p. 245. f. A. B.; *Vulcanus Cr.* p. 245. f. C. D.
 2. *Myseclus*. *Nobilis Cr.* p. 108. f. A. B.; *Sebaldus Cr.* p. 342. f. A. B.; *Erythus Cr.* p. 59. f. G.
 3. *Carcharodontes*. *Lavatheræ Esp.* (*Tages Hb.*); *Althææ Hb.*; *Malvæ Hb.* (*Alcææ Esper.*)
 4. *Pythionides*. *Jovianus Cr.* p. 292. f. L. M.; *Cerialis Cr.* p. 392. f. N. O.; *Herennius Cr.* p. 392. f. F.
 5. *Ephyriades*. *Otreus Cr.* p. 328. f. F.; *Folus Cr.* p. 74. f. F.; *Tryxus Cr.* p. 334. f. G. H. &c.
- VII. **VIGILANTES.** All the wings black, alternately spotted with yellow; divided into eight subgenera.
1. *Scoptes*. *Alpheus Cr.* p. 182. f. E. F.; *Protumnus Linn.* (*Iolaus Cr.* p. 270. f. F. G.) &c.
 2. *Cyclopides*. *Steropes Schiff.*; *Brontes Schiff.* (*Paniscus Fab.*); *Metis Cr.* p. 162. f. G. &c.
 3. *Trapezites*. *Symmomus Hb.*
 4. *Phemiades*. *Edippus Cr.* p. 366. f. E.; *Phineus Cr.* p. 63. f. G.; *Augias Linn.* &c.
 5. *Augiades*. *Criniscus Cr.* p. 300. f. G. H.; *Comma Linn.*; *Sylvanus Esp.*; *Helirius Cr.* p. 60. f. D. &c.
 6. *Thymelicus*. *Actæon Esper.*; *Venula Hb.*; *Vitellius Fab.*; *Linea Schiff.*
 7. *Apaustus*. *Menes Cr.* p. 393. f. H. I.
 8. *Brontiades*. *Procas Cr.* p. 179. f. D.; *Gentius Cr.* p. 179. f. C.; *Niveus Cr.* p. 22. f. C. (*Menalcas Fab.*) &c.
- VIII. **JUVENAS.** All the wings black, with bright spots; divided into six subgenera.
1. *Entheus*. *Peleus Linn. Cr.* p. 284. f. F.
 2. *Carystus*. *Jolus Cr.* p. 392. f. I. K.; *Hydaspes Cr.* p. 365. f. I. K.; *Phyllus Cr.* p. 176. f. B. C. &c.
 3. *Spioniades*. *Artemides Cr.* p. 391. f. L. M.; *Almon Cr.* p. 261. f. D. E.; *Psecas Cr.* p. 342. f. F. G.
 4. *Phanus*. *Vitreus Cr.* p. 366. f. D.
 5. *Cobalus*. *Virbius Cr.* p. 143. f. G.; *Nitocris Cr.* p. 393. f. F. G.; *Phorcus Cr.* p. 156. f. D. &c.
 6. *Paramimus*. *Scurra Hübn.*; *Talaus Linn. Cr.* p. 393. f. C.; *Eumelus Cr.* p. 156. f. E.

Of these forty-two subgenera it cannot be questioned that many represent evident groups, although of unequal rank, and in many instances artificially far apart, the eight families being quite artificial. We accordingly adopted certain of them in the nomenclature of our three plates of Hesperidæ, although a more mature consideration of their characters prevents us from regarding most of them as of generic rank, as is likewise the case with other subgeneric names indicated in Hübner's subsequent works.

The classification of Latreille, published in the *Encyclopédie Méthodique*, is founded upon more important considerations, and is as follows:—

- I. Angle anal des ailes inférieures prolongé en une queue presque lineaire. Subdivided from the entire or dentate margin and fasciated marking of the hind wings; sp. 1—7. Types, *Eudoxus Fab. Cr.*; *Eurycles* (*Dorantes Stoll*) *Proteus Linn.*
- II. Ailes inférieures sans queue ou n'ayant au plus qu'un prolongement fort court en maniere de dent, à l'angle anal.
1. Fore wings with the costa not or but slightly arched; the tip not hooked nor foliate.
 - A. Outer margin of hind wings, with the anal angle forming a small tooth or very small tail, or sinuated before the anal angle.
 - a. Wings nearly alike in both sexes; the fore ones without a dark streak on the disc running across the veins.
 - *. Part of the head, anus, anal angle of hind wings, and often the collar, scarlet or orange.
 - †. Outer margin of hind wings entire.
 - a. Antennæ suddenly bent and pointed at the tip; sp. 8—11. *Arinas F. Cr.*; *Polybius, F.* (*Palemon Cr.*).
 - b. Antennæ gradually curved at the tip, and terminated by a small oblong club, narrowed at the tip or obtuse; sp. 12—17. *Jupiter F.* (*Iphis Drury*; *Phidias Cr.*); *Phidias Linn.* &c.
 - ††. Outer margin of hind wings sinuated; sp. 18, 19. *Versicolor* and *Assaricus Cr.*
 - **.
 - †. Hind wings dentate.
 - a. Wings without vitreous spots, or with only a single discoidal one; sp. 20—25. *Polyzona* (*Vulcanus Cr.*) *Gnetus F.* (*Pygmalion Cr.*) &c.
 - b. All the wings with vitreous spots; sp. 26—28. *Momus* (*Vitreus Cr.*) *Erythus Cr.* &c.

- ††. Hind wings entire.
- a. Upper side of the body and base of the wings green or bluish-green; hind wings not spotted; sp. 29—35. *Creteus Cr.*; *Parmenides Cr.*; *Mercatus F.* (*Fulgerator Cr.*) &c.
 - b. Upper side of the body and base of the wings yellowish; upper side of the wings blackish, with transparent spots; hind wings with silvery spots or band on the under side; sp. 36—41. *Mercurius F.* (*Idas Cr.*); *Tityrus F.* (*Clarus Cr.*); *Epitus F. Cr.*; *Chromus Cr.* &c.
 - c. Body and base of the wings not silky green; under side of hind wings without silvery spots, or a white or silvery band.
 - φ. All the wings with vitreous spots, often edged with black; sp. 42—44. *Salatis Cr.*; *Ramusis Cr.*
 - φφ. All the wings with vitreous spots not edged with black; sp. 45—52. *Chemnis F. Donovan.*; *Ethlius Cr.* &c.
 - φφφ. Fore wings alone with vitreous spots; sp. 53—95. *Thrax Linn.*; *Ennius Fab. Don.*; *Phocas Fab. Cr.*; *Avitus Cr.*
- b. Wings differing in the sexes, having a dark oblique line or spot running across the veins in the middle of the fore wings, in the males of the greater number; hind wings never dentate, and not prolonged at the anal angle.
- *. With a dark oblique streak or spot on the fore wings of the males.
- †. Fore wings with vitreous spots.
 - a. Club of antennæ suddenly terminated by a hook; sp. 96—99. *Sinon (Sergestus Cr.)*, &c.
 - b. Club of antennæ regularly curved and without a suddenly formed hook; sp. 100. *Peronii*.
 - ††. Fore wings without vitreous spots, or with semi-transparent spots; sp. 101—120. *Naso F.*; *Augias L.*; *Phylæus*; *Comma*; *Sylvanus*, &c.
- **. Fore wings of the males without an oblique dark spot or streak; sp. 121—135. *Ornata Leach*; *Paniscus*; *Sylvius*; *Metis*.
- B. Hind wings neither elongated nor sinuated at the anal angle; hinder margin very rounded.
- a. Wings more or less dentate; sp. 136. 140. *Lavateræ*; *Althææ*; *Malvæ*, &c.
 - b. Wings entire; sp. 141—164. *Tages*, *Sidæ*, *Tessellum*, *Fritillum*, *Cardui*, *Syrictus*, *Jovianus*, *Mimas*, *Örcus*, &c.
2. Fore wings with the costa much arched, or the apex prolonged or hooked.
- A. Apical margin of fore wings nearly straight; sp. 165, 166. *Melander Cr.*; *Nearchus Latr.*
 - B. Apical margin of fore wings strongly curved or angulated, and the tip advanced or falcate; sp. 167—171. *Sebaldus F.* (*Busiris Cr.*); *Thrasybulus F. Don.*; *Mithridates F. Don.* &c.

On reviewing these two plans of distribution of the Hesperidæ, it will be evident, that whilst certain groups are adopted by both Hübner and Latreille, they have respectively carried their subdivisions much too far; raising, in fact, characters which are merely specific into sectional ones. In the following pages I have endeavoured to seize upon the more evident groups. A great number of species, however, which I have not had an opportunity of examining, and which it is impossible, from the too slight characters given of them by their describers, to refer to their natural position, I have been compelled to arrange together at the end of the genus *Hesperia*.

Genus I. PYRRHOPYGA.

PYRRHOPYGA, MIMONIADES, and PROTEIDES p. *Hübner*.
TAMYRIS *Swainson*.

BODY very robust; wings small in comparison with the body; head and tail often clothed with scarlet or orange hairs.

HEAD large, with the labial palpi convex, closely pressed against the face, with the terminal joint extremely minute and slightly deflexed.

Antennæ rather short, thick, not ringed; terminated by a curved elongate robust club, obtuse at the tip; being more attenuated and slender in the females.

WINGS when at rest, extended outwardly in a horizontal position.

Fore Wings elongate-triangular, with the apical margin entire, convex towards the apex. Discoidal cell much elongated. The lower disco-cellular vein very oblique, and uniting with the third median branch at a considerable distance from its base.

Hind Wings small, subtriangular, entire; the anal angle more or less produced and rounded.

Fore Legs with short tibiæ, armed with a central spur.

Hind Legs with the tibiæ armed with two subcentral, and two apical, spurs.

The types of this genus are at once known by the thickly curved club of the antennæ, and by the head, as well as the tail, being more or less clothed with scarlet or orange hairs. They are natives of South America. Several of the species which I have introduced at the end of the genus, differ from the types in wanting the scarlet hairs of the head and tail, in the more variegated markings of the wings, and in the fringe of the hind wings being varied with black spots.

PYRRHOPYGA.

1. PYR. THASUS *Cram. Pap.* pl. 380. f. M. N. (Papilio Th.); *Latr. Enc. M.* ix. 733.
Hesperia Zeleucus Fabricius, Ent. Syst. iii. i. 346.;
Donovan, Ins. India, pl. 51. f. 3.; *Swainson, Zool. Ill.*
1st series, pl. 33. (Tamyris Z.).
 Brazil, Surinam.
2. PYR. MÆNAS *Fabricius, Ent. Syst.* iii. i. 347. (Hesperia M.); *Latr. Enc. M.* ix. 733.
Papilio Bixæ Cramer, Pap. pl. 199. f. C. D. (not of Lin-
 næus).
Papilio Phidias Linnæus, Syst. Nat. 1. 2. p. 795. (ex
 parte); *Clerck, Icones*, t. 44. f. 1. 2.
Pyrrhopyga Hyperici Hübner, Zutr. f. 271, 272.
 Surinam, Cayenne.
3. PYR. PHIDIAS *Linnæus, Syst. N.* f. 1. 2. p. 195. (fæm. Papilio Ph.);
Fabricius, Mant. Ins. ii. 90.; *Latr. Enc. M.* ix. 734.;
Clerck, Icon. pl. 44. f. 3, 4.
Papilio Acastus Cramer, Pap. pl. 199. f. E., and pl. 41.
 f. C. D. (var.); *Stoll. Suppl. Cr.* pl. 7. f. 3. C. D.
 (Larva and Pupa).
 Cayenne, Surinam.
4. PYR. AMYCLAS *Cramer, Pap.* pl. 199. f. F. (Papilio A.); *Clerck,*
Icon. pl. 44. f. 5, 6.
Hesperia Amiatius Fabricius, Ent. Syst. iii. pt. 1. p. 347.;
Latr. Enc. M. ix. p. 734.
 Surinam, Cayenne.
5. PYR. CHARYBDIS *Westw. MS.* (Pyrrhopyga Ch.) *Doubl. Westw. &*
Hewits. Gen. D. Lep. pl. 78. f. 2.
 B. M.
6. PYR. NURSIA *Swainson, Zool. Ill.* 1st series, i. pl. 61. (Tamyris N.).
 South America?
7. PYR. LAONOME *Swainson, Zool. Ill.* 1st series, pl. 61. (Tamyris L.).
 South America?
8. PYR. XANTHIPPE *Latr. Ent. M.* ix. p. 734. (Hesperia X.); *Doubl.*
Westw. & Hewits. Gen. D. Lep. pl. 78. f. 1. (Pyrrho-
 pyga X.).
 Brazil. Mus. Boisduval.
9. PYR. VERSICOLOR *Latr. Enc. M.* ix. p. 735. (Hesperia V.); *Perty,*
Delect. An. Art. Brasiliæ, pt. iii.; *Lucas, Lepid. exot.*
 pl. 80.
 Mimoniades Mulcifer *Hübner, Zutrage*, f. 413, 414.
 Brazil.
10. PYR. OCYALUS *Hübner, Zutr.* f. 353, 354. (Mimoniades O.).
 Brazil.
11. PYR. MACHAON *Westw. MS.* (Erycides M.); *Doubl. Westw. & Hewits.*
Gen. D. Lep. pl. 78. f. 3.
 Brazil. B. M.
12. PYR. ASSARICUS *Cramer, Pap.* pl. 261. f. F. G. (Papilio A.); *Latr.*
Enc. M. ix. p. 735.
Hesperia Alsarius Fabricius, Ent. Syst. iii. pt. 1. p. 343.
 Brazil.
13. PYR. RENALDUS *Stoll. Suppl. Cram. Pap.* pl. 13. f. 1. (Papilio R.).
 Surinam.
14. PYR. VULCANUS *Cramer, Pap.* pl. 245. f. C. D. (Papilio V.).
Hesperia Polyzona Latr. Enc. M. ix. p. 736.; *Seba, Mus.*
 p. 4. pl. 20. f. 12, 13.
 Brazil, Surinam, Cayenne.

Genus II. ERYCIDES.

ERYCIDES, PYRRHOPYGA p., PHOCIDES p., CASTNIUS p. *Hübner.*

General characters of Pyrrhopyga.

HEAD occasionally clothed with red hairs.

Labial Palpi, as seen from above, forming two short square projections in front of the face, with a small space between them. Terminal joint small.

Antennæ moderately elongate, not ringed; terminated by an elongate, rather robust club, the tip of which is suddenly recurved, forming a slender hook, half or two-thirds of the length of the club itself.

WINGS of moderate size. *Fore Wings* elongate-triangular; the apical margin but slightly convex towards the tip; discoidal cell greatly elongate; the extremity very attenuated, in consequence of the lower disco-cellular vein springing from the third branch of the median much nearer its base than in the last genus, and being more elevated towards the costa.

Hind Wings triangular; the anal angle more or less produced and rounded; fringe sometimes spotted with black dots.

The insects of this group are very closely allied to those of the preceding genus, but are distinguished by the slender hooked termination of the antennæ. They are amongst the handsomest species of the family, and are natives of the hottest parts of South America. The species at the head of the genus have the head clothed with scarlet hairs. In the terminal species the wings are much more elegantly varied in their colours.

ERYCIDES.

1. ER. ARINAS *Cramer, Pap. pl. 100. f. D. (Papilio A.); Fabr. Mant. Ins. II. p. 87.; Latr. Enc. M. IX. p. 732.*
Surinam.

4. ER. LYCAGUS *Fabricius, Mant. Ins. II. p. 93. (Papilio L.); Cramer, Pap. pl. 176. f. G.; Latr. Enc. M. IX. p. 732.*
Surinam.

2. ER. CLEANTHES *Latr. Enc. M. IX. p. 732. (Hesperia C.).*
Brazil.

5. ER. IPHINOUS, *Latr. Enc. M. IX. p. 736. (Hesperia I.).*
Brazil.

3. ER. PALEMON *Fabricius, Mant. Ins. II. p. 87. (Papilio P.); Cramer, Pap. pl. 131. f. F.*
Hesperia Polybius Fabricius, Ent. Syst. III. pt. 1. p. 337.; Donovan, Ins. India, pl. 51. f. 2.; Latr. Enc. M. IX. p. 732.
Surinam, Brazil.

6. ER. PIGMALION *Cramer, Pap. pl. 245. f. A. B. (Papilio P.).*
Hesperia Gnetus Fabricius, Mant. Ins. II. p. 89.; Aubert. Misc. pl. 18. f. 8, 9.; Latr. Enc. M. IX. p. 736.
Cayenne, Surinam.

7. ER. URANIA *Westw. (Erycides U.) Doubl. Westw. & Hewits. Gen. D. Lep. pl. 79. f. 1.*
Mexico. B. M.

Genus III. GONIURIS.

GONIURIS *Hübner.*

EUDAMUS *Swainson, Boisduval.*

BODY. Head and palpi as in Erycides.

Antennæ with the club unequally fusiform; the outer half abruptly curved, and forming a lengthened hook, gradually attenuated to the top; alike in both sexes.

All the wings, when the insect is at rest, extended horizontally.

Fore Wings elongate-triangular; outer margin convex towards the apex. Discoidal cell long and narrow, with the middle and lower disco-cellular veins of equal length, forming a straight line extending obliquely from the third median branch (at a considerable distance from its base) to the upper disco-cellular, which is very short and oblique; the disc marked with various semipellucid spots.

Hind Wings subtriangular; fringe white, or dotted with black. Anal angle produced into a long straight tail, obtuse at the tip. Discoidal cell closed by the very slender disco-cellular veins which form a slight arch arising from the insertion of the third median vein and the postcostal branch, at a considerable distance from its origin.

These species (of which *Papilio Proteus* may be considered as the type) are at once distinguished by the long caudal appendages to the hind wings, and by the hook of the antennæ being gradually attenuated from the thickest part of the club to the tip. They are all natives of America; and we are informed by Mr. Swainson, that their flight is exceedingly rapid in the morning and evening, and that they rest with all the four wings horizontally extended. They appear to be subject to considerable variation in the form of the semipellucid spots of the fore-wings; and it is hence probable, that of the thirty species which Mr. Swainson states he is acquainted with, several are only varieties.

GONIURIS.

1. GON. EUDOXUS *Fabricius, Mant. Ins.* II. p. 85. (Papilio E.); *Cramer, Pap.* pl. 366. f. G. H.; *Latr. Enc. M.* IX. p. 729. Surinam.
2. GON. METOPHIS *Latr. Enc. M.* IX. p. 729. (Hesperia M.). Brazil.
3. GON. CÆLUS *Cramer, Pap.* pl. 343. f. C. D. (Papilio C.); *Latr. Enc. M.* IX. p. 729. Brazil.
4. GON. ORION *Fabricius, Mant. Ins.* II. p. 85. (Papilio O.); *Cramer, Pap.* pl. 155. f. A. B.; *Drury, Ill.* III. pl. 17. f. 3, 4.; *Latr. Enc. M.* IX. p. 729.; *Lucas, Lepid. exot.* pl. 80. Papilio Proteus var. β . *Linnæus, Mus. L. Utr.* p. 333.; *Clerck, Icon.* t. 42. f. 5, 6. Brazil, Surinam.
5. GON. SIMPLICIUS *Stoll, Suppl. Cram.* t. 39. f. 6, 6. E. (Papilio S.). Hesperia Eurycles var. *Latr. Enc. M.* IX. p. 730. Surinam.
6. GON. DORANTES *Stoll, Suppl. Cram.* t. 39. f. 9. (Papilio D.). Papilio Proteus var. δ , ϵ , *Linn. Mus. L. Utr.* p. 333.? Hesperia Eurycles var. A. *Latr. Enc. M.* IX. p. 730. Brazil.
7. GON. EURYCLES *Latr. Enc. M.* IX. p. 730. (Hesperia E.). Urbanus fortis Dorantes *Hübner, Exot. Samml.* Band 1. pl. —. Brazil.
8. GON. CHALCO *Hübner, Zutr.* f. 313. 314. Eudamus Agesilaus *Swainson, Zool. Ill.* 2d ser. pl. 48. f. 1. Brazil.
9. GON. BRACHIUS *Hübner, Zutr.* f. 609, 610. Eudamus Doryssus *Swainson, Zool. Ill.* 2d ser. pl. 48. f. 2. Brazil.
10. GON. CATILLUS *Cramer, Pap.* pl. 260. f. F. G. (Papilio C.); *Latr. Enc. M.* IX. p. 730. Brazil.
11. GON. PROTEUS *Linnæus, Syst. Nat.* I. II. p. 794. (Papilio P.); *Fabricius, Mant. Ins.* II. p. 85.; *Cramer, Pap.* pl. 260. f. D. E.; *Smith-Abbot, Lep. Georgia*, p. 1. t. 18.; *Clerck, Icon.* t. 42. f. 1, 2.; *Latr. Enc. M.* IX. p. 730.; *Merian, Ins. Surin.* t. 63. f. 2.; *Hübner, exot. Samml.* Band 1. pl. —.; *Boisduval et Lec. Lép. Amér. Sept.* pl. 69. (Eudamus P.); *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 79. f. 7. (var). Tropical America, Surinam, Georgia.
12. GON. TARCHON *Hübner, Samml. exot. Schm.* Band II. pl. —. (Telegonus T.). Papilio Proteus *Sulzer, Tesch.* p. 19. f. 1, 2. —?

Genus IV. GONILOBA *Westw.*

EUDAMUS p. *Boisduval*.

EPARGYREUS, CRETEUS, TALIDES, ASTRAPTES, THRACIDES, TELEGONUS, and PROTEIDES p. *Hübner*.

BODY. Head and palpi as in Goniuris.

Antennæ terminated by a much longer, and generally more slender, club, than in the last genus, the terminal half of which is reflexed, forming a slender hook, acute at the tip.

Fore Wings long, triangular; generally marked on the disc with semipellucid spots. Apical margin entire, slightly convex towards the apex; veins arranged as in Goniuris.

Hind Wings large, subtriangular; outer angle rounded; outer margin slightly scalloped, spotted with black. Anal angle produced (at the extremity of the submedian vein) into a very short tail, turned outwards or into an obtuse point. Upper disc of the wing often unspotted, but the base yellowish or metallic coloured. Lower disc often varied with silvery patches.

This group is very closely allied to Goniuris; the chief difference being the different form of the hind wings, of which the anal angle is prolonged into an obtuse lobe or very short tail. The species are of a large size, and, for the most part, natives of America. H. Creteus *Cr.* (Alardus *Stoll*), Cælenus *Cr.*, Parmenides *Cr.*, &c., are entirely destitute of spots on the upper side, but they are so closely allied to P. Fulgurator of Cramer, &c., that they must be included in the same genus. The species are very numerous, and may be arranged into a number of minor groups, according to the markings of the wings.

August 1. 1852.

G R

GONILOBA.

1. GON. CRETEUS *Cramer, Pap.* pl. 284. f. C. D. (Papilio C.); *Latr. Enc. M.* ix. p. 739.
Papilio Alardus *Stoll, Suppl. Cram. Pap.* pl. 39. f. 7.
var. A.
Brazil.
2. GON. CELENUS *Cramer, Pap.* p. 293. f. A. B.
Amboyna.
3. GON. CASSANDER *Fabricius, Ent. Syst.* iii. p. 1. 337. (Hesperia C.);
Jones, Icon. vi. pl. 24. f. 1.; *Donovan, Nat. Repos.* iv.
pl. 136.
—?
4. GON. PARMENIDES *Cramer, Pap.* pl. 364. f. E. F. (Papilio P.); *Latr. Enc. M.* ix. p. 740.
Brazil.
5. GON. BIXÆ *Merian, Ins. Surinam*, pl. 44.; *Linnaeus, Syst. Nat.*
pt. i. ii. p. 795. (Papilio B.)? *Latr. Enc. M.* ix.
p. 740.?
America.
6. GON. APASTUS *Cramer, Pap.* pl. 111. f. D. E. (Papilio A.).
Papilio Acastus *Fabricius, Mant. Ins.* ii. p. 87.; *Latr. Enc. M.* ix. p. 740.
Brazil, &c.
7. GON. AULESTES *Cramer, Pap.* pl. 283. f. E. F. G. (Papilio A.).
Hesperia Acastus var. *Latr. Enc. M.* ix. p. 740.
Brazil.
8. GON. HYLASPES *Cramer, Pap.* pl. 364. f. G. H. (Papilio H.).
Hesperia Acastus var. *Latr. Enc. M.* ix. p. 740.
Brazil.
9. GON. PERVIVAX *Hübner, Verz.* n. 1086. (Astraptes P.).
Papilio Pertinax *Stoll, Suppl. Cram. Pap.* pl. 35. f. 2.
(not of Cramer).
Surinam.
10. GON. SCIPIO *Fabricius, Ent. Syst.* iii. pt. 1. p. 338. (Hesperia S.);
Jones, Icones, p. 6. t. 87. f. 1.; *Donovan's Drawings*
Bibl. Hope, Oxford.
P. Narcosius *Stoll, Suppl. Cram. Pap.* pl. 39. f. 8.
Surinam, *Stoll.* "In Indiis," *Fabricius.*
11. GON. FULGURATOR *Cramer, Pap.* pl. 284. f. A. B. (Papilio F.).
Hesperia Mercatus *Fabricius, Ent. Syst.* iii. pt. 1. p. 332.;
Latr. Enc. M. ix. p. 741.
Surinam, Brazil.
12. GON. TALUS *Cramer, Pap.* pl. 176. f. D. (Papilio T.).
Hesperia Ausonius *Latr. Enc. M.* ix. p. 741.
Brazil, Surinam.
13. GON. PYRAMUS *Cramer, Pap.* pl. 245. f. E. (Papilio P.).
—?
14. GON. SAVIGNYI *Latr. Enc. M.* ix. p. 741. (Hesperia S.).
Polygonus lividus *Hübner, Exot. Samml.* Band ii. pl. —.
Antilles.
15. GON. PHEDON *Cramer, Pap.* pl. 245. f. F. G. (Papilio Ph.).
—?
16. GON. COMETES *Cramer, Pap.* pl. 227. f. F. (Papilio C.).
Surinam.
17. GON. SCHÖNHERRI *Latr. Enc. M.* ix. p. 742. (Hesperia S.).
Java.
18. GON. MERCURIUS *Fabricius, Mant. Ins.* ii. p. 96. (Papilio M.);
Latr. Enc. M. ix. p. 742.
Papilio Idas *Cramer, Pap.* pl. 260. f. A. B.
Brazil, Surinam.
19. GON. TITYRUS *Fabricius, Mant. Ins.* ii. p. 85. (Papilio T.); *Abbott-Smith, Lep. Georgia*, i. pl. 19.; *Boisduval et Leconte, Léop. Amér. Sepr.* pl. 72. (Eudamus T.).
Papilio Clarus *Cramer, Pap.* pl. 41. f. E. F.
North America.
20. GON. YUCCÆ *Boisduval et Leconte, Léop. Amér. Sepr.* pl. 70. (Eudamus? Y.).
United States.
21. GON. OLYNTHUS *Boisduval et Leconte, Léop. Amér. Sepr.* pl. 75. f. 1, 2.
(Eudamus? O.).
United States.
22. GON. EXADEUS *Cramer, Pap.* pl. 260. f. C. (Papilio E.).
Hesperia Tityrus var. *Latr. Enc. M.* ix. p. 743.
Epargyres Socus *Hübner, Exot. Samml.* Band 2. pl. —.
Var. (with the spots on the fore wings larger), Epargyreus
Pseudexadeus *Westw. MS.*; *Doubl. Westw. & Hewits.*
Gen. D. Lep. pl. 80. f. 1.
Brazil, Surinam.
23. GON. EPITUS *Fabricius, Mant. Ins.* ii. p. 86. (Papilio E.); *Cramer, Pap.* pl. 343. f. E. F.; *Latr. Enc. M.* ix. 744.
Brazil, Guiana.
24. GON. EVADNE *Cramer, Pap.* pl. 343. (Papilio E.).
Hesperia Epitus var. *Latr. Enc. M.* ix. p. 744.
Brazil, Guiana.
25. GON. COMUS *Cramer, Pap.* pl. 391. f. N. O. (Papilio C.).
Surinam.
26. GON. BRINO *Cramer, Pap.* t. 353. f. E. F. & 392. f. C. D. (Papilio B.); *Latr. Enc. M.* ix. 744.
Brazil.
27. GON. DUBIUS *Cramer, Pap.* pl. 354. f. B. C. (Papilio D.); *Latr. Enc. M.* ix. p. 744.
Surinam.
28. GON. ANAPHUS *Fabricius, Mant. Ins.* ii. p. 89. (Papilio A.); *Cramer, Pap.* pl. 178. f. F.; *Latr. Enc. M.* ix. p. 760.
Surinam.
29. GON. ORCHAMUS *Cramer, Pap.* pl. 155. f. E. F. (Papilio O.).
Surinam.
30. GON. ARCHALAEUS *Cramer, Pap.* pl. 391. f. I. K. (Papilio A.).
Surinam.
31. GON. ERICUS *Fabricius, Ent. Syst. Suppl.* p. 432. (Hesperia E.);
Latr. Enc. M. ix. p. 744.
East India.

32. GON. CHROMUS Cramer, *Pap.* pl. 284. f. E. (Papilio C.); *Latr. Enc. M.* ix. p. 744.
Coromandel.
33. GON. ALEXIS Fabricius, *Ent. Syst.* iii. pt. 1. p. 336. (Hesperia A.); *Latr. Enc. M.* p. 745.
East India.
34. GON. EURIBATES Cramer, *Pap.* pl. 393. f. D. (Papilio E.).
Surinam.
35. GON. SALATIS Cramer, *Pap.* pl. 393. f. E. (Papilio S.); *Latr. Enc. M.* ix. p. 745.
Brazil.
36. GON. MURETUS Fabricius, *Ent. Syst.* iii. pt. 1. p. 332. (Hesperia M.); Jones, *Icon.* vi. pl. 88. f. 1.; Donovan's *Drawings in Bibl. Hope, Oxford*.
——, "In Indiis" (Fabricius).
37. GON. RAMUSIS Cramer, *Pap.* pl. 242. f. G. (Papilio R.); *Latr. Enc. M.* ix. p. 745.
Brazil.
38. GON. RHETUS Fabricius, *Mant. Ins.* ii. p. 86. (Papilio Rh.); *Latr. Enc. M.* ix. p. 750.
Papilio Midas Cramer, *Pap.* pl. 63. f. G.
Surinam, Brazil.
39. GON. CHEMNIS Fabricius, *Ent. Syst.* iii. pt. 1. p. 331. (Hesperia C.); Donovan, *Ins. India*, pl. 49. f. 1.; *Latr. Enc. M.* ix. p. 746.
"In Indiis," Fabricius.
40. GON. HESUS Westwood MS. (Telegonus H.); *Westw. & Hewits. Gen. D. Lep.* pl. 78. f. 5.
——? B. M.
41. GON. ETHLIUS Cramer, *Pap.* pl. 392. f. A. B. (Papilio E.); *Latr. Enc. M.* ix. p. 746.; Clerck, *Icon.* t. 42. f. 2, 3. var.?
Surinam, Brazil.
42. GON. CORIDON Fabricius, *Mant. Ins.* ii. p. 87. (Papilio C.).
Hesperia Phocion Fabricius, *Ent. Syst.* iii. pt. 1. p. 335.; *Latr. Enc. M.* ix. p. 762. (Hesperia Ph.).
Brazil, Cuba, Jamaica.
43. GON. LUCAS Fabricius, *Ent. Syst.* iii. pt. 1. p. 339. (Hesperia L.); *Latr. Enc. M.* ix. p. 751.
Antilles.
44. GON. ANTONINUS *Latr. Enc. M.* ix. p. 746. (Hesperia A.).
Brazil, Surinam.
45. GON. SALIUS Cramer, *Pap.* pl. 68. f. E. (Papilio S.).
Surinam.
46. GON. NYCTELIUS *Latr. Enc. M.* ix. p. 746. (Hesperia N.).
Brazil.
47. GON. DALMANNI *Latr. Enc. M.* ix. p. 747. (Hesperia D.).
Brazil.
48. GON. BASOCHESI *Latr. Enc. M.* ix. p. 747. (Hesperia B.).
Brazil.
49. GON. FISCHERI *Latr. Enc. M.* ix. p. 747. (Hesperia F.).
Brazil.
50. GON. LESUEURI *Latr. Enc. M.* ix. p. 748. (Hesperia L.).
United States.
51. GON. BONFILIUS *Latr. Enc. M.* ix. p. 748. (Hesperia B.).
Brazil.
52. GON. DAN Fabricius, *Mant. Ins.* ii. p. 88. (Papilio D.).
Hesperia Eacus *Latr. Enc. M.* ix. p. 738. (not Eacus Cramer, nor of Swainson).
Tranquebar, Java.
53. GON. SERGESTUS Cramer, *Pap.* pl. 74. f. C. male (Papilio S.).
Papilio Sinon Cramer, *Pap.* pl. 342. f. D. E.; *Latr. Enc. M.* ix. p. 762.
Brazil, Surinam.
54. GON. FEISTHAMELI Boisduval, *Voy. de l'Astrolabe, Entomol.* pt. 1. p. 159. pl. 3. f. 6.; Hombro et Jacquinet, *Voy. Pole Sud, Lépid.* pl. 3. f. 19, 20.
Amboyna, Bourou.
55. GON. SABADIUS Boisduval, in Guérin *Iconogr. R. An. Ins.* pl. 82. f. 2.; *Faune Ent. de Madagascar*, pl. 63. pl. 9. f. 2. (Thyme S.).
Mauritius, Isle of Bourbon.
56. GON. NEPOS Fabricius, *Ent. Syst.* iii. pt. 1. p. 346. (Hesperia N.); *Latr. Enc. M.* ix. p. 787.; Jones, *Icones*, vi. tab. 79. f. 2.; Donovan's *Drawings in Bibl. Hope, Oxford*.
Papilio Japetus Cramer, *Pap.* pl. 365. f. E. F?; Drury, *Ill. exot. Ins.* iii. pl. 17. f. 1, 2.?
Java, Amboyna.
57. GON. PHINEUS Fabricius, *Mant. Ins.* ii. p. 85. (Papilio P.); Cramer, *Pap.* pl. 176. f. E.; *Latr. Enc. M.* ix. p. 765.
Surinam.
58. GON. LUCRETIVUS *Latr. Enc. M.* ix. p. 753. (Hesperia L.).
Caristus Lapithes Hübner, *Zutr.* f. 791, 792.
Brazil, (East India, Hübner).
59. GON. MINOS Latreille, *Enc. M.* ix. p. 756. (Hesperia M.).
Brazil.
60. GON. XANTHOPTES Hübner, *Samml. exot. Schm.* Bd. ii. pl. —.
(Nisoniades X.).
——?
61. GON. ARISTOTELES Westw. MS. (Thracides A.); *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 80. f. 2.
Amazons, Mus. Hewitson.
62. GON. JUSTINIANUS *Latr. Enc. M.* ix. p. 760. (Hesperia J.).
Brazil.
63. GON. LAFREYAYII *Latr. Enc. M.* ix. p. 754. (Hesperia L.).
Brazil.
64. GON. FANTASOS Cramer, *Pap.* pl. 300. f. E. F. (Papilio F.).
Papilio Abebalus Cramer, *Pap.* pl. 365. f. G. H.; *Latr. Enc. M.* ix. p. 754.
Brazil, (not Africa).
65. GON. HELOPS Drury, *Ill.* iii. pl. 33. f. 2, 3. Append.
Hesperia Ennius Fabricius, *Ent. Syst.* iii. pt. 1. p. 337. (Hesperia E.); Jones, *Icones*, vi. t. 89. f. 1.; Donovan, *Ins. India*, pl. 51. f. 1.; *Latr. Enc. M.* ix. p. 749.
Brazil, "In Indiis," Fabricius.
66. GON. PHOCUS Cramer, *Pap.* pl. 162. f. F. (Papilio Ph.); Fabricius, *Ent. Syst.* iii. pt. 1. p. 334.; *Latr. Enc. M.* ix. p. 749.
Var. Papilio Morpheus Cramer, *Pap.* pl. 162. f. F.
Guiana, Brazil.
67. GON. AVITUS Cramer, *Pap.* pl. 354. f. D. E. (Papilio A.); *Latr. Enc. M.* ix. p. 750.
Brazil, Surinam.

68. GON. CRINISUS *Cramer, Pap. pl. 300. f. G. H. (Papilio Cr.)*; *Latr. Enc. M. ix. p. 750.*
Brazil.
69. GON. EBUSUS *Cramer, Pap. pl. 300. f. C. D. (Papilio E.)*.
Surinam.
70. GON. PSECAS *Cramer, Pap. pl. 342. f. F. G. (Papilio P.)*.
Surinam.
71. GON. ALCMON *Cramer, Pap. pl. 261. f. D. E. (Papilio A.)*.
—?
72. GON. ARTEMIDES *Cramer, Pap. pl. 391. f. L. M. (Papilio A.)*.
Surinam.
73. GON. ZESTOS *Hübner, Zutr. f. 615, 616. (Proteides Z.)*.
Surinam.
74. GON. BETHYLLUS *Abbott-Smith, Lep. Georgia, p. 1. t. 22. (Papilio B.)*; *Latr. Enc. M. ix. p. 764.*; *Boisd. et Leconte, Léop. Am. Sepr. pl. 74. (Eudamus B.)*.
Georgia, Virginia.
75. GON. ASTYLOS *Cramer, Pap. pl. 283. f. A. B. (Papilio A.)*; *Hübner, Verz. n. 1134. (Talides A.)*.
Surinam.
76. GON. BROTEAS *Cramer, Pap. pl. 283. f. C. D. (Papilio B.)*; *Hübner, Verz. n. 1133. (Talides B.)*; *Stoll, Suppl. Cram. pl. 17. f. 6.*
Surinam.
77. GON. CORYTAS *Cramer, Pap. pl. 100. f. C. (Papilio C.)*; *Hübner, Verz. No. 1085. (Astraptes C.)*.
Surinam.
78. GON. VULPINUS *Hübner, Samml. exot. Schm. Band. II. pl. —.*
(*Oleides V.*).
—?
79. GON. OLENUS *Hübner, Zutrage, f. 487, 488. (Lychnuchus O.)*.
Brazil.
80. GON. NICIAS *Fabricius, Ent. Syst. III. pt. 1. p. 332. (Hesperia N.)*.
Cayenne.
81. GON. GODARTII *Latr. Enc. M. ix. p. 762. (Hesperia G.)*.
Brazil.

Genus V. ISMENE *Swainson.*

CASTNIUS *p. Hübner.*

THYMELE *Boisduval (Faune Madagascar).*

BODY very robust. Abdomen generally extending nearly to the extremity of the hind wings.

HEAD broad, very thickly clothed with hairs.

Labial Palpi broad, compressed; the hairs of the middle joint longest along the inner and outer edge, causing the front of the palpus to appear as if having a convex channel, and extending in front about the length of the eyes. Terminal joint very slender, porrected horizontally about the same length.

Antennæ rather short, gradually thickened from the middle into a long club of moderate thickness, which is gradually curved and attenuated to the tip.

Fore Wings subtriangular. Apical margin regularly but slightly convex; generally destitute of spots.

Hind Wings short and broad; outer angle and margin very rounded. Anal angle generally produced into a slightly developed rounded lobe, destitute of semipellucid spots.

Legs (especially the hind tibiæ in the males), generally very densely hairy; hind tibiæ with four spurs.

This genus is at once distinguished by its antennæ gradually incrassated from the middle to about three fourths of their length, and then as gradually reduced to a fine terminal curved point, as well as by the elongation of the terminal joint of the palpi. The species are natives of the Old World. The type I. *Cedipodea*, from India and the adjacent islands, is distinguished by the male having a large silky blotch near the base of the fore wings, and by the extreme narrowness of the discoidal cell in that sex; the third branch of the median vein, arising in that sex at scarcely more than the length of one fourth of the wing from the base, and the lower discocellular being united to it rather beyond the middle of the wing. The hind tibiæ, in this sex, are also extremely thick, and the discoidal cell of the hind wings does not extend beyond the origin of the branch of the postcostal vein. The African species, including the fine II. *Iphis Drury*, have the basal portion of the second branch of the median vein of the fore wings, on the contrary, greatly elongated, and the discoidal cell of the hind wings extending some distance beyond the base of the branch of the postcostal vein. The legs of the last named species are less densely clothed with hairs than in the rest of the genus.

ISMENE.

1. ISM. IPHIS *Drury, Ill.* II. 15. f. 34. (Papilio I.).
Papilio Phidias *Cramer, Pap.* pl. 244. f. A. B. (nec Linnaeus).
Papilio Jupiter *Fabricius, Mant. Ins.* II. p. 87.; *Latr. Enc. M.* IX. p. 733.
Western Tropical Africa, China?, Bengal?
2. ISM. CHALYBE *Westw. MS.* (Ismene Ch.); *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 79. f. 2.
Papilio Bixæ *Linnaeus, Syst. Nat.* f. II. p. 795. ?; *Clerck, Icon.* pl. 42. f. 7, 8.; *Fabricius, Mant. Ins.* II. p. 89. ?; *Latreille, Enc. M.* IX. 740. ? *Donovan, Nat. Repos.* pl. 163. (but not the P. Bixæ of Merian, *Surinam*, t. 44.
Guinea (not America). Mus. Boisduval, &c.
3. ISM. OEDIPODEA *Swainson Zool. Ill.* 1st series, I. pl. 16. (m. and f.) (Ismene O.).
Java.
4. ISM. BENJAMINI *Guérin-Ménév. in Delessert, Souv. Ind. Ent.* p. 79. pl. 22. f. 2, 2a. (Thyme B.).
Hesperia Xanthopogon Kollar in Hugel's Reise n. Kaschmir, App. p. 453. pl. 18. f. 1, 2.
Neelgherries, Himalaya.
5. ISM. FLORESTAN *Cramer, Pap.* pl. 391. f. E. F. (Papilio F.); *Boisduval, Faune de Madag.* p. 61. (Thyme F.).
Madagascar, Eastern Africa.
6. ISM. TAMINATUS *Hübner, Zutrage*, f. 193, 194. (Cœliades T.).
Surinam.
7. ISM. PISISTRATUS *Fabricius, Ent. Syst.* III. pt. 1. p. 345. (*Hesperia P.*); *Jones, Icones*, VI. t. 26. f. 1.; (*Donovan's Drawings in Bibl. Hope, Oxford*); *Latr. Enc. M.* IX. p. 589. and 761.
America, Fabricius (?), (Guinea?).
8. ISM. RATEK *Boisduval, Faune Ent. de Madag.* p. 61. pl. 9. f. 1. (Thyme R.); ditto in *Delegorgue, Voy. S. Afr.* p. 594.
Madagascar, Port Natal.
9. ISM. RAMANATEK *Boisduval, Faune Ent. de Madagascar*, p. 62. pl. 9. f. 3. (Thyme R.).
Isle of Bourbon, Madagascar.
10. ISM. VESPASIUS *Fabricius, Ent. Syst.* III. pt. 1. p. 334. (*Hesperia V.*); *Jones, Icon.* VI. pl. 86. f. 1.; *Donovan's Drawings in Bibl. Hope, Oxford.*
"In Indiis" (Fabricius).
11. ISM. LADON *Cramer, Pap.* pl. 284. f. G. (Papilio L.); *Latr. Enc. M.* IX. p. 749.; var. ?
Coromandel Coast, Java.
12. ISM. HELIUS *Fabricius, Mant. Ins.* II. p. 85. (Papilio H.); *Cramer, Pap.* pl. 198. f. B.; *Latr. Enc. M.* IX. p. 761.
Surinam.

Genus VI. PHAREAS.

PHAREAS *Westwood.*PELEUS *Swainson.*BRONTIADES, ENTHEUS, PITHONIDES, and PARAMIMUS *Hübner.*

BODY moderately robust. Head broad, with the labial palpi broad, slightly porrected; the hairs of the inside of the middle joint extending farthest, so as to cause the palpi to appear as if obliquely truncated. Terminal joint small, or moderately elongated.

Antennæ long, slender, with the club long, gradually formed, not robust, well arched, not hooked; the extremity gradually attenuated, and very acute, and finely setose along the front margin.

WINGS horizontally divaricated when at rest. Fore Wings moderately elongated; arched along the fore margin. The apical angle regularly convex.

Hind Wings rounded, entire (in Ph. Cœleste the hind wings are more elongated), with the space occupied by the extremity of the branches of the median vein elongated and dilated into a large rounded lobe, and the outer margin slightly waved.

Legs long, slender. Tibiæ of the hind legs destitute of the middle spurs.

The species of which I have formed this genus are generally elegantly varied in their colours, and are distinguished by the elongate slender arched club of the antennæ, and especially by the structure of the hind tibiæ, which offers an exception to the characters of the family as above stated. The beautiful species represented in Plate LXXVIII. f. 4. differs from the more typical P. Gentius, Peleus, &c., in the semipellucid spots of the fore wings, and in the under side of the hind wings offering a remarkable contrast to the

upper side, nearly the whole of the disc being orange coloured, with a narrow blue-black border along the outer portion of the margin. The beautiful species represented in our Plate LXXX. f. 4., under the name of *Pithonides Loxus*, although differing in the form of the wings and style of their colouring, agrees with the types of *Phareas* in the structure of the antennæ, palpi, and veining of the wings.

PHAREAS.

1. *PH. EUMELUS* *Fabricius, Mant. Ins.* ii. p. 89. (*Papilio* E.); *Cramer, Pap.* pl. 156. f. E.; *Latr. Enc. M.* ix. p. 758. Guiana, Brazil.
2. *PH. DUMERILII* *Latr. Enc. M.* ix. p. 757. (*Hesperia* D.).
—?
3. *PH. TALAUS* *Linnaeus, Syst. Nat.* i. pt. 2. p. 792. (*Papilio* T.); *Fabricius, Ent. Syst.* iii. pt. 1. p. 349.; *Cramer, Pap.* pl. 393. f. C.; *Clerck, Icon.* t. 45. f. 1.; *Seba, Mus.* t. 4. pl. 57. p. 18.; *Hübner, Exot. Samml.* Band ii. pl. —. (*Paramimus* T.). Guiana, Brazil.
4. *PH. BUSIRIS* *Fabricius, Ent. Syst.* iii. pt. 1. p. 345. (*Hesperia* B.); *Jones, Icones*, vi. t. 23. f. 1.; *Donovan, Ins. India*, pl. 52. f. 2.; *Latr. Enc. M.* ix. p. 758. (not of *Cramer*). India.
5. *PH. PELEUS* *Linnaeus Syst. Nat.* i. pt. 2. p. 792. (*Papilio* P.); *Cramer, Pap.* pl. 284. f. F.; *Clerck, Icon.* t. 45. f. 5.; *Latr. Enc. M.* ix. p. 758. n. 85. Brazil, Surinam.
6. *PH. GENTIUS* *Fabricius, Mant. Ins.* ii. 90. p. (*Papilio* G.); *Cramer, Pap.* pl. 179. f. C.; *Latr. Enc. M.* ix. p. 759.; *Swainson, Zool. Ill.* 2nd series, pl. 75. (*Peleus* G.). Brazil, Guiana.
7. *PH. PROCAS* *Fabricius, Ent. Syst.* iii. pt. 1. p. 308.; *Jones, Icon.* vi. 55. f. 1.; *Cramer, Pap.* pl. 179. f. D. (*Papilio* P.); *Godart, Enc. M.* ix. p. 586. (*Erycina* P.); *Latreille, Enc. M.* ix. p. 759. (*Hesperia* P.); (*Limnas* P.) antè, p. 460. Surinam.
8. *PH. PERTINAX* *Cramer, Pap.* pl. 364. f. F. G. (*Papilio* P.); *Latr. Enc. M.* ix. p. 755. (not of *Stoll*).
Var. ? *Papilio Æcas* *Cramer, Pap.* pl. 343. f. A. B.; *Swainson, Zool. Ill.* 2d series, pl. 75. (*Peleus* Æ.) not *Eacus*, *Latr.*
Brazil, Surinam.
9. *PH. CÆLESTE* *Westw. MS.* (*Phareas* C.); *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 78. f. 4. Para. B. M. &c.
10. *PH. LOXUS* *Westw. MS.* (*Pithonides* L.); *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 80. f. 4. —? Mus. Hewitson.
11. *PH. TERTULLIANUS* *Fabricius, Ent. Syst.* iii. pt. 1. p. 341. (*Hesperia* T.); *Jones, Icones*, vi. t. 81. f. 1.; *Donovan's Drawings in Bibl. Hope, Oxford.*
"In Indiis," *Fabricius*.
12. *PH.?* *JULETTUS* *Stoll, Suppl. Cramer*, pl. 9. f. 1. Surinam.

Genus VII. PYRGUS.

PYRGUS, EPHYRIADES, BRONTIADES, TAGIADES, CARCHARODUS *Hübner*.
 SYRICHtus *Boisduval*.
 THYMELE p. *Stephens*, but not of *Fabricius*.
 SYMMACHIA *Sodoffsky*.
 SPILOTHYRUS *Duponchel*.

HEAD and thorax broad. Abdomen elongated, narrow, with the tip bearded in the males.

Labial Palpi very hairy; the length, from the insertion of the antennæ to the extremity of the hairs of the second joint, being about equal to that between the antennæ and hind margin of the head; lateral hairs of the middle joint arranged to form an angle on each side, and united in the middle. Terminal joint small, slender, porrected to a short distance beyond the hairs of the second joint.

Antennæ short, ringed with white, terminated by robust curved club, obtuse at the tip and not hooked.

WINGS deflexed when the insect is at rest.

Fore Wings moderate-sized, slightly arched in front. Apical margin convex. Costa recurved, in the male, from near the base to the middle. Veins arranged as in *Pamphila*. Fringe spotted with black.

Hind Wings broadly triangular; outer angle rounded. Anal angle also rounded, and not produced. Margin entire, or scalloped. Fringe spotted with black.

Hind Legs with the middle spurs short but distinct on denuding the limb.

In the folded structure of the costal margin of the fore wings of the males, these insects are closely allied to Nisoniades, from which, however, they are distinguished by their strongly tessellated wings. The obtuse tip of the antennæ, destitute of a hook, separates them from most of the preceding groups. Some of the species, which have the wings more decidedly scalloped, form a separate subgenus. The curious insect figured in Plate LXXX. f. 3. under the name of Paraminus Empoleus, seems to associate better with this than any other group.

PYRGUS.

A. Wings entire, or but slightly scalloped.

1. *P. TESSELLUM* Ochsenh. *Pap. Eur.* ed. 2. vol. iv. p. 158. (Papilio T.); Hübner, *Sch. Eur. Pap.* f. 469, 470.; Rambur, *Faune Andalusie*, pl. 8. f. 1, 2. Papilio Carthami Hübner, *Pap.* f. 726—728. Papilio Fritillum var. major. Fabricius, *Mant. Ins.* ii. p. 91. Spain, Russia, Hungary.
2. *P. FRITILLUM* Fabricius, *Mant. Ins.* ii. p. 91. (Papilio F.); Ochsenh. *Pap. Eur.* ed. 2. pl. 1. p. 207.; Godart, *Lép. France*, ii. pl. B. b. 28. f. 1, 2.; Freyer, *N. Beitr.* pl. 349. f. 4.; Rambur, *Faune Andal.* pl. 8. f. 14. Papilio Malvæ Linnæus, *Syst. Nat.* 1. pl. ii. p. 795. ?; Roesel, *Ins. L.*, *Pap. diurn.* tab. 10. f. 7. (not of Fabricius). Var. (sp. distinct ?) Papilio Alveus Hübner, *Schm. Eur. Pap.* f. 461—463.; Ochsenh., Godart, *Suppl.* 1. ii. pl. 50. f. 7, 8.; Rambur, *Faune Andalus.* pl. 8. f. 3.; Boisdual, *Icones*, pl. 46. f. 1—3. Hesperia Cacaliæ Boisdual; H. Schöffler, *Suppl. Hübner*, Hesp. f. 23—25.; Rambur, *Faune Andal.* pl. 8. f. 6, 7. (sp. distinct ?). Hesperia cæcus Freyer, *N. Beitr.* pl. 493. f. 3, 4. Europe, Alps.
3. *P. ALVEOLUS* Ochsenh. *Pap. Eur.* ed. 2. t. 1. p. 208. (Papilio A.); Hübner, *Schm. Eur.* f. 466, 467. 597. (var.); Meigen, *Eur. Schm.* pl. 55. f. 2.; Freyer, *N. Beitr.* pl. 361. f. 2.; Rambur, *Faune Andal.* pl. 8. f. 15. Papilio Fritillum Hübner, *Op. Cit.* f. 464, 465. (var. fem.); Lewin, *Brit. Butt.* pl. 46. f. 4, 5. Hesperia Malvæ Linnæus, *Faun.* 1081.; Zetterstedt, *Ins. Lapp.* p. 915.; Dalman, *Mem. Acad. Stockh.* 1816; Esper, tab. 36., *Suppl.* pl. 12. f. 5. tab. 51. *Cont.* f. 1, 2.; Westw. & Humphr. *Brit. Butt.* pl. 38. f. 1—6. Papilio Althææ Borkhausen, *Pap. Eur.* (var.). Papilio Taras Bergstr. tab. 91. f. 5, 6.; Meigen, *Schm. Eur.* pl. 55. f. 3.; Hübner, f. 846, 847. (var.). Papilio Lavateræ Fabricius, *Mant. Ins.* ii. p. 91. Hesperia Cardui Latreille, *Enc. M.* ix. p. 784.; Godart, *Lép. Fr.* ii. pl. 12. bis f. 34. H. Melotis Godart, *Suppl.* 1. p. 11. pl. 42. f. 1, 2. (var.) Europe, Lapland.
4. *P. SAO* Hübner, *Schm. Eur.* f. 471, 472. (Papilio S.); Ochsenh. *Pap. Eur.* ed. 1. p. 459.; Latr. *Enc. M.* ix. p. 782.; Godart, *Lép. France*, ii. p. B. b. 28. f. 3, 4. Papilio Sertorius Ochsenh. *Pap. Eur.* 2d. edit. i. p. 211.; Hübner text, p. 71. n. 8.; Meigen, *Schm. Eur.* pl. 54. f. 6.; Freyer, *N. Beitr.* pl. 361. f. 4. Papilio Fritillum Schöffler, *Icon. Nom. Panz.* t. 162. f. 1, 2. Central Europe.
5. *P. CRIBRELLUM* Kindermann; H. Schöffler, *Suppl. Hübner*, Hesp. 3. f. 12, 13.; Freyer, *N. Beitr.* tab. 349. f. 1.; Eversmann, *Bull. Mosc.* 1841, p. 25. Turkey, Russia.
- 5* *P. PHLOMIDIS* Frivaldszky; Herr-Schöffler, *Suppl. Hübner*, Hesp. f. 819. Turkey, Russia.
6. *P. CARTHAMI* Ochsenh. *Pap. Eur.* vol. 4.; Hübner, *Schm. Eur. Pap.* f. 720. and 723.; Meigen, *Sch. Eur.* pl. 54. f. 5.; Godart, *Suppl.* 1. p. 11. pl. 42. f. 3, 4.; Freyer, *N. Beitr.* pl. 349. f. 3.; Rambur, *Faune Andalus.* pl. 8. f. 8. Papilio Malvarum Esper, *Schm.* pl. 23. f. 2. Hesperia Tessellum Godart, *Lép. France*, i. pl. 12. f. 4, 5.; Ochsenh. 1, 2. p. 205. Central Europe.
7. *P. SERRATULÆ* Rambur, *Faune Andalus.* pl. 8. f. 9.; H. Schöffler, *Suppl. Hübner*, Hesp. pl. 4. f. 18—22. ? (var. H. Fritillum ?); Hübner, f. 506. Russia, Spain.
8. *P. ONOPORDI* Boisdual; Rambur, *Faune Andalus.* pl. 8. f. 13.; H. Schöffler, *Suppl. Hübner*, Hesper. pl. 6. f. 31, 32. ? (var. H. Fritillum ?). Spain.
9. *P. CARLINÆ* Boisdual; Rambur, *Faune Andalus.* pl. 8. f. 11. (var. H. Fritillum ?). Spain.
10. *P. CYNARÆ* Boisdual; Freyer, *N. Beitr.* pl. 349. f. 2.; H. Schöffler, *Suppl. Hübner*, Hesp. pl. 1. f. 4, 5. (m.). pl. 2. f. 6, 7. (f.); Rambur, *Faune Andal.* pl. 8. f. 4, 5. Papilio Carthami fem. Hübner, *Schm. Eur. Pap.* f. 721, 722. Turkey, Spain, Russia.
11. *P. SIDÆ* Fabricius, *Mant. Ins.* ii. p. 91.; Hübner, *Schm. Eur. Pap.* f. 468.; Godart, *Lép. France*, ii. pl. A. a. p. 27. f. 5, 6.; Meigen, *Schm. Eur.* pl. 54. f. 3.; Freyer, *N. Beitr.* pl. 361. f. 1. South Europe, Russia.
12. *P. CENTAURÆ* Boisdual, *Ind. M.* p. 36.; H. Schöffler, *Suppl. Hübner*, Hesp. pl. 1. f. 1—3.; Rambur, *Faune Andal.* pl. 8. f. 10. Russia, Spain, Polar Regions.
13. *P. THERAPNE* Rambur in *Annales Soc. Ent. France*, vol. i. 1832, pl. 7. f. 4.; Boisdual, *Icones*, pl. 46. f. 6, 7.; Godart, *Suppl.* 1. p. 11. pl. 42. f. 9, 10.; H. Schöffler, *Suppl. Hübner*, Hesp. pl. 5. f. 16, 17. Corsica, South France, Spain, Portugal.
14. *P. CIRSI* Boisdual; Godart, *Suppl.* ii. pl. 28. f. 1, 2.; H. Schöffler, *Suppl. Hübner*, Hesper. pl. 6. f. 33, 34.; Rambur, *Faune Andalus.* pl. 8. f. 12. Spain, South France.
15. *P. EUCRATES* Ochsenh. *Pap. Eur.* i. p. 213. (Papilio E.). Esper, *Pap.* ii. tab. 124. *Cont.* 79. f. 6.; Latr. *Enc. M.* ix. p. 780. Portugal.

16. *P. PROTO* Ochsenh. *Pap. Eur.* ed. 2. i. p. 210. (*Papilio P.*); *Esper*, *Pap. Eur.* t. 123., *Cont.* 78. f. 5, 6.; *Latr. Enc. M.* ix. p. 780.; *Hübner*, *Schm. Eur. Pap.* f. 918—921.; *Meigen*, *Schm. Eur.* tab. 55. f. 1.; *Godart*, *Suppl.* i. p. 11. pl. 42. f. 7, 8.; *Boisduval*, *Icon.* pl. 46. f. 4, 5.; *Freyer*, *N. Beitr.* tab. 361. f. 5.
South Europe, Portugal, Russia.
17. *P. ORBIFERA* Latreille, *Enc. M.* ix. p. 782. (*Hesperia O.*); *Hübner*, *Schm. Eur. Pap.* f. 803—806.; *Boisduval*, *Icones*, pl. 47. f. 1, 2.; *Freyer*, *N. Beitr.* pl. 362. f. 1.; *Godart*, *Suppl.* i. p. 2. pl. 42. f. 5, 6.
Var. ? *Hesp. Tesselloides H. Schüffer*, *Suppl. Hübner. Hesp.* pl. 2. f. 10, 11.
Hungary, Turkey, Sicily.
18. *P. VINDEUS* Cramer, *Pap.* pl. 353. f. G. H. (*Papilio V.*); *Latr. Enc. M.* ix. 785.; *Doubl. Westw. & Hewits. Gen. D. L.* pl. 79. f. 6.
Cape of Good Hope.
19. *P. GALBA* Fabricius, *Ent. Syst.* iii. pt. 1. p. 352. (*Hesperia G.*); *Latr. Enc. M.* ix. p. 785.
Bengal, Tranquebar.
20. *P. SPIO* Linnaeus, *Mus. Utr.* p. 338., *Syst. Nat.* i. pt. 2. p. 796. (*Papilio S.*); *Fabricius*, *Ent. Syst.* iii. pt. 1. p. 354.; *Donovan*, *Ins. India*, pl. 50. f. 5.
Cape of Good Hope.
21. *P. GALEUS* Fabricius, *Ent. Syst.* iii. pt. 1. p. 350. (*Hesperia G.*); *Donovan*, *Ins. Ind.* pl. 50. f. 3.; *Latr. Enc. M.* ix. p. 773.
"In Indiis" (Fabricius).
22. *NERVA* Fabricius, *Ent. Syst.* iii. pt. 1. p. 340. (*Hesperia N.*); *Latr. Enc. M.* ix. p. 789.; *Jones*, *Icones*, vi. tab. 79. f. 3.; *Donovan's Drawings in Bibl. Hope, Oxford.*
"In Indiis" (Fabricius).
23. *P. ORCUS* Fabricius, *Ent. Syst.* iii. pt. 1. p. 341. (*Hesperia O.*); *Donovan*, *Ins. India*, pl. 52. f. 1.; *Latr. Enc. M.* ix. p. 789. (not of Cramer); *Hübner*, *Samml. exot. Schm.* Band iii. pl. —.
Papilio Cerealis Cramer, *Pap.* pl. 392. f. N. O.; *Stoll*, *Suppl. Cramer*, pl. 10. f. 1.
Brazil, Guiana.
24. *P. PSEUDO-JOVIANUS* Westw.; *Jovianus* Cramer, *Pap.* pl. 392. f. L. M. (*Papilio J.*) (not of Fabricius, &c.).
Surinam.
25. *P. JOVIANUS* Fabricius, *Ent. Syst.* iii. pt. 1. p. 348. (*Hesperia J.*); *Donovan*, *Ins. Ind.* pl. 50. f. 1.; *Latr. Enc. M.* ix. p. 788.; *Hübner*, *Zutr.* f. 713, 714. (*Caristus J.*).
Brazil.
26. *P. SALVIANUS* Fabricius, *Ent. Syst.* iii. pt. 1. p. 348. (*Hesperia S.*); *Donovan*, *Ins. Ind.* pl. 50. f. 2.; *Latr. Enc. M.* ix. p. 789.
"In Indiis" (Fabricius).
27. *P. HERENNIUS* Cramer, *Pap.* pl. 392. f. E. F. (*Papilio H.*); *Hübner*, *Samml. exot. Schm.* Band iii. pl. —. (*Pythonides H.*).
Surinam.
28. *P. ASYCHIS* Cramer, *Pap.* pl. 334. f. E. F.
Surinam.
29. *P. TEXTOR* Hübner, *Zutr.* f. 515, 516. (*Pyrgus T.*).
United States, N. America.
30. *P. NOTHUS* Fabricius, *Ent. Syst.* iii. pt. 1. p. 349.; *Donovan's Drawings in Bibl. Hope, Oxford.*
America.
31. *P. MENIPPUS* Fabricius, *Ent. Syst.* iii. pt. 1. p. 353.
Surinam.
32. *P. SYRICHtus* Fabricius, *Mant. Ins.* ii. p. 90.; *Latr. Enc. M.* ix. p. 785. (*Hesperia S.*).
Papilio Oileus Linnaeus, *Syst. Nat.* i. pt. 2. p. 795. ?
Steph. Haust. i. p. 99. (Algeria); *Westw. & Humphr. Brit. Butt.* pl. 38. f. 14, 15.
Papilio Orcus Cramer, *Pap.* pl. 334. f. I—L. (not of Fabr. Latr. &c.).
Brazil, Cayenne, Surinam, Mexico, Georgia.
33. *P. TRYXUS* Cramer, *Pap.* pl. 334. f. G. H. (*Papilio T.*); *Latr. Enc. M.* ix. p. 786.; *Hübner*, *Samml. exot. Schm.* Band i. pl. —.
Brazil, Surinam.
34. *P. ARSALTE* Linnaeus, *Syst. Nat.* i. pt. 2. p. 762. (*Papilio A.*); *Clerck*, *Icones*, *Ins.* t. 23.; *Latr. Enc. M.* ix. p. 786.
Papilio Niveus Cramer, *Pap.* pl. 22. f. C.; *Hübner*, *Samml. exot. Schm.* Band i. pl. —.
Papilio Menalcas Fabricius, *Mant. Ins.* ii. p. 91.
Brazil, Guiana.
35. *P. MAIMON* Fabricius, *Ent. Syst.* iii. pt. 1. p. 349.
Cayenne.
36. *P. DIOSCORIDES* Fabricius, *Ent. Syst.* iii. pt. 1. p. 329. (*Hesperia D.*); *Latr. Enc. M.* ix. p. 787.
Tranquebar.
37. *P. DOMICELLA* Erichson in *Schomburgk Reise Guiana*, iii. (*Syrichthus E.*).
British Guiana.
38. *P. LEUCODESMA* Erichson in *Schomburgk Reise Guiana*, iii. (*Syrichthus L.*).
British Guiana.
39. *P. FESTIVUS* Erichson in *Schomburgk Reise Guiana*, iii. (*Syrichthus F.*).
British Guiana.
40. *P. MELANDER* Cramer, *Pap.* pl. 270. f. H. (*Papilio M.*); *Latr. Enc. M.* ix. p. 791.
Brazil, Surinam.
41. *P. ? EMPOLEUS* Westw. *M.S.* (*Paramimus E.*); *Doubl. Westw. & Hewits. Gen. D. L.* pl. 80. f. 3.
— ? Mus. Hewitson.
-
- B. *Wings strongly scalloped.* (G. *Carcharodus* Hübner; *Spilothyrus Duponchel.*)
42. *P. LAVATERÆ* Esper, *Pap. Eur.* i. t. 82., *Cont.* 32. f. 4.; *Hübner*, *Schm. Eur. Pap.* f. 454, 455.; *Meigen*, *Schm. Eur.* t. 54. f. 2.; *Godart*, *Lép. France*, ii. pl. B. b. 28. f. 7, 8.
Papilio Alceæ Fabricius, *Mant. Ins.* ii. p. 90.
South of France, Germany, &c.
43. *P. ALTHÆÆ* Hübner, *Schm. Eur. Pap.* f. 452, 453. (*Papilio A.*); *Meigen*, *Schm. Eur.* pl. 54. f. 4.; *Godart*, *Lép. France*, ii. pl. B. b. 28. f. 5, 6.; *Latr. Enc. M.* ix. p. 778.
(An var. *P. Malvæ W. F. ?*).
Russia, South of France, Germany.
44. *P. MALVÆ* Wien. *Verz.* p. 159. (*Papilio M.*, not of Linnaeus); *Fabricius*, *Mant. Ins.* ii. p. 90.; *Hübner*, *Schm. Eur.* f. 450, 451.; *Wood*, *Ind. Ent.* pl. 53. f. 17.; *Ochsenh. Pap. Eur.* ed. 1.; *Godart*, *Lép. France*, i. pl. 12. bis f. 5. F.
Papilio Malvarum Ochsenh. *Pap. Eur.* ed. 2. p. 195.; *Meigen*, *Schm. Eur.* tab. 54. f. 1.
Papilio Alceæ Esper, *Pap. Eur.* t. 51., *Cont.* 1. f. 3.
Europe, England ?

45. *P. FLOCCIFERA* Zeller in *Isis*, 1847, p. 286. (an var. *P. Malvæ W. V. ?*). Sicily.
46. *P. MARRUBII* Rambur, *Faune Andalusie*, pl. 12. f. 3, 4. (Syrictus

B.); *H. Schüffer*, *Suppl. Hübner*, tab. 3. f. 14, 15.; *Freyer*, *N. Beitr.* tab. 397. f. 2, 3.
S. Boetica Rambur, *MS.*
 An var. *P. Malvæ W. V. ?*
 Spain.

Genus VIII. NISONIADES.

NISONIADES *Hübner*.
 THANAOS *Boisduval*.

General characters of *Pyrgus*, but with the head as wide as the thorax, and the abdomen more elongated.

Antennæ with the club somewhat fusiform, elongate, curved, and with the tip gradually acuminate, that of the male being longer and more slender than that of the female.

Labial Palpi very hirsute, with the terminal joint very slender and distinct.

Fore Wings divaricating, and horizontally extended when at rest, with the costal margin often recurved, in the males, from the base to about the middle. Apical margin entire; fringe not spotted. Veins as in *Pyrgus*.

Hind Wings broadly triangular, with the outer and anal angles rounded; the fringe not scalloped nor spotted.

Hind Legs with the middle spurs distinct.

The males of the types of this genus have the fore margin of the anterior pair of wings reflexed, as in the last genus, the inside of the fold being furnished with fine downy hairs. The general colour of the wings is brown, with ashy coloured undulating bars, and with a few small semipellucid spots. The species are of small size, and are widely dispersed. I have added various species, which, although destitute of the cinereous wavy marks, appear to be closely allied to the types. *H. Mithridates*, *Phalaenoides*, &c., although evidently closely related to *H. Tages*, &c., appear to belong rather to the group typified by *H. Sebaldis Fab.*

NISONIADES.

- | | |
|--|--|
| <p>1. <i>NIS. TAGES</i> <i>Linnaeus</i>, <i>Syst. Nat.</i> i. ii. p. 795. (<i>Papilio</i> T.); <i>Wien. V.</i> p. 159.; <i>Fabricius</i>, <i>Mant. Ins.</i> ii. p. 92.; <i>Lewin, Brit. Butt.</i> t. 45. f. 3, 4.; <i>Hübner</i>, <i>Pap.</i> f. 456, 457.; <i>Esper</i>, tab. 23. f. 3.; <i>Godart</i>, <i>Lép. France</i>, i. pl. 12. bis f. 4.; <i>Meigen</i>, <i>Eur. Schm.</i> pl. 55. f. 4.; <i>Westw. & Humphr. Brit. Butt.</i> pl. 38. f. 9—13.
 Var. <i>Hesperia unicolor</i> <i>Freyer</i>, <i>N. Beitr.</i> pl. 595. f. 1. (Turkey).
 Europe, England.</p> <p>2. <i>NIS. CERVANTES</i> <i>Graslin</i>, <i>Ann. Soc. Ent. France</i>, v. pl. 17. B. f. 1, 2. p. 558. (<i>Tanaos</i> C.); <i>Freyer</i>, <i>N. Beitr.</i> pl. 417. f. 3. (an var. <i>P. Tages</i>, <i>Boisd. Ind. M.</i> p. 37.?).
 Spain.</p> <p>3. <i>NIS. MARLOYI</i> <i>Boisduval</i>, <i>Icones</i>, pl. 47. f. 6, 7. (<i>Tanaos</i> M.).
 <i>Hesperia sericea</i> <i>H. Schüffer</i>, <i>Suppl. Hübner. Hesper.</i> pl. 5. f. 29, 30.; <i>Freyer</i>, <i>N. Beitr.</i> pl. 265. f. 4.
 Turkey.</p> <p>4. <i>NIS. JUVENALIS</i> <i>Fabricius</i>, <i>Ent. Syst.</i> iii. pt. 1. p. 335. (<i>Hesperia</i> L.); <i>Abbott & Smith</i>, <i>Lep. Georgia</i>, i. t. 21.; <i>Latr. Enc. M.</i> ix. p. 789.; <i>Boisduval et Leconte Lép. Amér. Septentr.</i> pl. 65. f. 1—5.
 United States.
 August 1. 1852.</p> | <p>5. <i>NIS. COSTALIS</i> <i>Westw. MS.</i> (<i>Nisoniades</i> c.); <i>Doubl. Westw. & Hewits. Gen. D. Lep.</i> pl. 79. f. 3.
 — ?
 Mus. Boisduval.</p> <p>6. <i>NIS. CATULLUS</i> <i>Fabricius</i>, <i>Ent. Syst.</i> iii. pt. 1. p. 348. (<i>Hesperia</i> C.); <i>Donovan</i>, <i>Ins. India</i>, pl. 50. f. 4.; <i>Abbott & Smith, Lep. Georgia</i>, i. pl. 14.; <i>Latr. Enc. M.</i> ix. p. 777.
 North America.</p> <p>7. <i>NIS. LEPELETIERII</i> <i>Latr. Enc. M.</i> ix. p. 777. (<i>Hesperia</i> L.).
 Cape of Good Hope.</p> <p>8. <i>NIS. HERMINIERI</i> <i>Latr. Enc. M.</i> ix. p. 777. (<i>Hesperia</i> H.).
 Carolina.</p> <p>9. <i>NIS. HOTTENTOTA</i> <i>Latr. Enc. M.</i> ix. p. 777. (<i>Hesperia</i> H.).
 Cape of Good Hope.</p> <p>10. <i>NIS. BROMIUS</i> <i>Stoll, Suppl. Cram.</i> pl. 8. f. 1. (<i>Papilio</i> B.).
 <i>Th. Enobius Boisduval</i>.
 Surinam.</p> <p>11. <i>NIS. ÆPITUS</i> <i>Hübner</i>, <i>Zutr.</i> f. 659, 660. (<i>Thracides</i> Æ.).
 Java.</p> |
|--|--|

12. NIS. *CHLOROCEPHALA* Latr. *Enc. M.* ix. p. 790. (*Hesperia* C.).
Brazil.
13. NIS. *MIMAS* Fabricius, *Mant. Ins.* ii. p. 90. (*Papilio* M.); Cramer,
Pap. pl. 52. f. E. F.; Latr. *Enc. M.* ix. p. 789.
Surinam, Brazil.
14. NIS. *OTREUS* Cramer, *Pap.* pl. 328. f. F. (*Papilio* O.).
Brazil. Mus. Boisd.
15. NIS. *BRIZO* Boisduval et Leconte, *Lép. Amér. Septentr.* pl. 66.
(*Thanaos* B.).
United States.
16. NIS. *NISO* Linnæus, *Mus. Utr.* p. 339., *Syst. Nat.* i. ii. p. 796.
(*Papilio* N.); Fabricius, *Ent. Syst.* iii. pt. 1. p. 354.
No. 347.
Cape of Good Hope.
17. NIS. *RUSTAN* Kollar in *Trans. Acad. Vienna*, v. pt. 1. p. 10, 11.
(*Tanaos* R.).
Southern Persia.
18. NIS. *CORBULO* Cramer, *Pap.* pl. 354. f. A. (*Papilio* C.).
Anastrus obscurus Hübner, *exot. Samml. Schm.* Band ii.
pl. —.
Surinam.
19. NIS. *LALANDII* Latr. *Enc. M.* ix. p. 761. (*Hesperia* L.).
— ?
20. NIS. *PHILEMON* Fabricius, *Mant. Ins.* ii. p. 89. (*Papilio* Ph.); Latr.
Enc. M. ix. p. 788.; Drury, *Ill. exot. Ins.* i. pl. 19.
f. 5, 6.
Papilio Flyas Cramer, *Pap.* pl. 328. f. E.
Brazil, Antilles.

Genus IX. CYCLOPIDES.

CYCLOPIDES Hübner.
STEROPES Boisduval.

HEAD as broad as the thorax.

Labial Palpi remote apart, very hirsute, porrected as long as the head; terminal joint very minute, conical, nearly concealed by the hairs of the preceding joint.

Antennæ short, with the club stout, slightly curved, not hooked at the tip, which is obtuse.

WINGS, when at rest, erect.

Fore Wings long; fringe entire, not spotted. Disc dark brown, with orange-coloured spots, alike in both sexes.

The males without a recurved costa, or a thickened oblique streak on the disc.

Hind Wings short, broad, entire; spotted in the same manner as the fore wings.

Hind Legs with the tibiæ destitute of a pair of spurs in the middle.

ABDOMEN, especially in the males, long and slender, with the tip slightly tufted.

Boisduval's name, *Steropes*, is rejected not only because of the priority of Hübner's name, but also because there is a Coleopterous genus, *Steropus*, and the name *Steropes* is that of one of the European species. The peculiar character of the want of the middle pair of spurs in the hind legs was first pointed out by myself, as an exceptional character of the group, eleven years ago, in *British Butterflies and their Transformations*. I have also observed this character in an undescribed North American species allied to *Paniscus*; but it is remarkable that in the South African *H. Metis* the hind tibiæ have two pairs of spurs, as in the great majority of the family. The insect represented in Plate LXXIX. f. 4., as an example of the genus, is an aberrant species, and seems closely allied to *H. Edipus* of Cramer. It is evidently nearly related to some of the species of *Pamphila*.

CYCLOPIDES.

1. CYCL. *PANISCUS* Fabricius, *Mant. Ins.* ii. p. 85. (*Papilio* P.); Esper,
Pap. Eur. t. 28., *Suppl.* p. 4. f. 2. t. 95., *Cont.* 50. f. 5.
var.; Godart, *Lép. France*, i. pl. 12. f. 1, 2.; Meigen,
Schm. Eur. pl. 55. f. 6.; Freyer, *N. Beitr.* pl. 513.
f. 1.; Westw. & Humphr. *Brit. Butt.* pl. 39. f. 6—9.

Papilio Brontes Wien. *Verz.* p. 160.; Hübner, *Schm. Eur.*
Pap. f. 475, 476.

Papilio Palemon Pallas, *Voy.* i., App. No. 63.
Europe, England.

2. CYCL. SYLVIVS *Ochsenheimer, Pap. Eur.* i. p. 221.; *Hübner, Schm. Eur. Pap.* f. 477, 478. f. 641—644.; *Godart, Léop. France*, p. 2. pl. A. a. 27. f. 1, 2.; *Wood, Ind. Entom.* pl. 53. f. 18.
Papilio Paniscus var. *Fabricius, Mant. Ins.* ii. p. 85.; *Boisduval, Ind. Meth.* p. 34.
Papilio Palæmon var. *Pallas, Voy.* i. App. No. 63. β.
Hesperia sylvicola Meigen, Schm. Eur. pl. 55. f. 7.
 Germany.
3. CYCL. STEROPES *Wien. Verz.* p. 160. (*Papilio* St.); *Hübner, Schm. Eur. Pap.* f. 473, 474.; *Esper*, tab. 41., *Suppl.* p. 17. f. 1. tab. 80., *Cont.* p. 30. f. 4.; *Meigen, Eur. Schm.* pl. 55. f. 5.
Papilio Aracanthus Fabricius, Mant. Ins. ii. p. 89. (*Papilio* A.); *Panzer, F. I. G.* p. 9. 16; *Godart, Léop. France*, i. pl. 12. bis f. 1. and pl. 12. ter f. 1.
Papilio Morpheus Pallas, Voy. tom. i. p. 471.
Erynnis Speculum Schrank, Faun. Bo. ii. p. 160.
 Europe.
4. CYCL. ARGYROSTIGMA *Eversmann MS.*; *Keferstein in Ent. Zeit. Stettin.* 1851, p. 328.
 Russia.
5. CYCL. PHOCÆUS *Westw.*
- Hesperia Phocion Fabricius, Ent. Syst.* iii. i. p. 354. n. 345.
 Not *H. Phocion Fab. Op. C.* p. 335., nor *Suppl.* p. 431.
 Southern Africa. Mus. Banks.
6. CYCL. DARA *Kollar in Hugel's Reise d. Kaschmir*, App. p. 455. (*Hesperia* D.).
 Himalaya.
7. CYCL.? METIS *Linnaeus, Syst. Nat.* i. ii. p. 792. (*Papilio* M.); *Fabricius, Mant. Ins.* ii. p. 85.; *Cramer, Pap.* pl. 162. f. G.; *Drury, Ill. Ent.* ii. pl. 16. f. 3, 4.; *Latr. Enc. M.* ix. p. 776.; *Wulfen, Ins. Cap.* p. 33.
 Cape of Good Hope.
8. CYCL.? MENES *Cramer, Pap.* pl. 393. f. H. I. (*Papilio* M.); *Stoll, Suppl. Cram.* pl. 7. f. 6.
 Para, Surinam (Coromandel, and Cape of Good Hope. *Cramer?*).
9. CYCL.? CORAS *Cramer, Pap.* pl. 31. f. —. (*Papilio* C.); *Latr. Enc. M.* ix. p. 766.
Papilio Otho?; *Abbott & Smith, Lep. Georgia*, i. t. 16.; *Boisduval et Leconte, Léop. Amér. Septentr.* pl. 77.
Papilio Æsculapius Fabricius, Ent. Syst. iii. i. p. 347.
 United States.

Genus X. PAMPHILA.

PAMPHILA *Fabricius.*HESPERIA *Boisduval.*CÆLENORRHINUS, CYCLOPIDES p., STEROPES p., AUGIADES, THYMELICUS *Hübner.*

HEAD very broad, especially in the males. Thorax very robust. Abdomen as long as the hind wings.

Labial Palpi porrected, short, densely hairy, wide apart; last joint very short, nearly naked and exposed.

Antennæ of moderate length, terminated by a thick, nearly straight, club, which is generally furnished at the tip with a short slender hook.

Fore Wings alone erect in repose. Apical margin convex, especially in the females; fringe entire, not alternated in its colours; disc, in the males of many of the species, marked with an oblique velvety patch of scales.

Hind Wings broadly triangular; outer and anal angles rounded, slightly truncated near the anal angle; margin entire. Discoidal vein nearly obliterated.

Fore Legs with a spur in the middle of the tibiæ.

Hind Legs with the middle spurs of the tibiæ distinct.

The general colour of the wings of the species of this genus is either tawny orange marked with brown, or brown strongly marked with orange; the colour being generally so disposed as to leave a row of spots near the apical margin of the fore wings; the colours in the female, moreover, are brighter than those of the males. Their flight is very powerful, owing to the very robust form of their bodies, and the strength and form of their wings, which are rather short and somewhat pointed at the tip. In their larva state, they generally feed upon grasses.

The short thick club of the antennæ, terminated by a short slender recurved hook, and the minute size of the last joint of the labial palpi, are the chief characteristics of this genus, in addition to the velvety oblique streak in the wings of the males of many of the species.

PAMPHILA.

1. PAM. COMMA *Linnaeus, Syst. Nat.* i. ii. p. 763. (Papilio C.); *Wien. F.* p. 160.; *Fabricius, Mant. Ins.* ii. p. 84.; *Lewin, Brit. Butt.* t. 45. f. 1, 2.; *Westw. & Humphr. Brit. Butt.* pl. 41. f. 1—4.; *Hübner, Schm. Eur. Pap.* f. 479, 480, 481.; *Godart, Léop. France*, i. pl. 12. ter f. 4.; *Meigen, Schm. Eur.* pl. 56. f. 2.
Europe, England.
2. PAM. SYLVANUS *Fabricius, Mant. Ins.* ii. p. 84. (Papilio S.); *Lewin, Brit. Butt.* t. 46. f. 1—3.; *Hübner, Schm. Eur. Pap.* f. 482—484.; *Godart, Léop. France*, pl. 12. bis f. 2. and pl. 12. ter f. 3.; *Meigen, Schm. Eur.* pl. 56. f. 3.; *Westw. & Humphr. Brit. Butt.* pl. 40. f. 4—6.
Papilio Melicerta Bergstr. Nomenkl. t. 90. f. 1—4.
Papilio Comma Scopoli, Carn. No. 463.
Europe, England.
3. PAM. LINEA *Wien. Verz. fam. A.* No. 5. (Papilio L.); *Fabricius, Mant. Ins.* ii. p. 84.; *Hübner, Schm. Eur. Pap.* f. 485—487.; *Godart, Léop. France*, i. pl. 12. f. 3. and pl. 11. ter f. 2.; *Meigen, Schm. Eur.* pl. 56. f. 4.; *Westw. & Humphr. Brit. Butt.* pl. 41. f. 8—12.
Papilio Thaumias Esper, Pap. Eur. i. t. 36., *Suppl.* p. 12. f. 2, 3. tab. 98., *Cont.* p. 53. f. 5—10.; *Lewin, Brit. Butt.* p. 45. f. 5—7.
Papilio flavus Müller, Zool. Dan. Pr. p. 115.
Papilio Comma Barbut, Gen. p. 178.
? *Papilio Venula Hübner, f.* 666—669. (fem.).
Europe, England.
4. PAM. LINEOLA *Ochsenheimer, Pap. Eur.* i. p. 230., iv. p. 161. (Papilio L.); *Latr. Enc. M.* ix. p. 771.; *Meigen, Schm. Eur.* pl. 56. f. 5.; *Godart, Suppl.* i. ii. pl. 41. f. 1—3.
Papilio Virgula Hübn. Schm. Eur. Pap. f. 660—663.
Germany.
5. PAM. NOSTRADAMUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 328. (Hesperia N.); *Coquebert, Illustr. Icon.* t. 17. f. 2.; *Latr. Enc. M.* ix. p. 773.; *Godart, Suppl.* i. p. 11. pl. 41. f. 4—6.; *H. Schaffer, Suppl. Hübn. Hesp.* pl. 6. f. 35, 36.
Papilio Pumilio Ochsenheimer, Eur. Pap. i. p. 216.; *Meigen, Schm. Eur.* pl. 56. f. 1.; *Freyer, N. Beitr.* pl. 513. f. 2, 3.
Papilio pygmaeus Cyrilli, Ent. Neap. t. 5. f. 5.; *Esper, Schm. Eur.* t. 99., *Cont.* p. 54. f. 3.; *Hübner, Schm. Eur. Pap.* f. 458, 459, 460.
North of Africa and Spain.
6. PAM. ÆTNA *Boisduval, Ind. M.* p. 35.; *Freyer, N. Beitr.* pl. 417. f. 4.; *H. Schaffer, Hübn. Suppl. Hesp.* pl. 5. f. 26—28.
Hesp. Nostradamus Boisduval, Icones, pl. 47. f. 7.
Sicily (? See *Erichson's Bericht*, 1844, p. 77. and *Kefenstein, Ent. Zeit.* 1851, p. 328. Brazil?).
7. PAM. ACTÆON *Esper, Pap. Eur.* i. p. 345. f. 36., *Suppl.* p. 12. f. 4.; *Ochsen. Pap. Eur.* ed. 2. t. 1. p. 231.; *Hübner, Schm. Eur. Pap.* f. 488—490.; *Godart, Léop. France*, ii. pl. A. a. 27. f. 3, 4.; *Meigen, Schm. Eur.* pl. 56. f. 6.; *Wood, Ind. Ent.* pl. 3. f. 79.; *Curtis, Brit. Ent.* pl. 442. (m. and f.).
Europe, England.
8. PAM. ORNATA *Leach, Zool. Miscell.* i. pl. 55. f. 1, 2, 3. (Hesperia O.); *Latr. Enc. M.* ix. p. 772.
New Holland.
9. PAM. PICTA *Leach, Zool. Miscell.* i. pl. 55. f. 4, 5. (Hesperia P.); *Latr. Enc. M.* ix. p. 772.
New Holland.
10. PAM. PROPETIUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 325. (Hesperia P.); *Donovan, Ins. Ind.* pl. 47. f. 2.; *Latr. Enc. M.* ix. p. 773.
"In Indiis," (Fabricius).
11. PAM. FLAVO-VITTATA *Latr. Enc. M.* ix. p. 768. (Hesperia f.); *Boisduval, Voy. l'Astrolabe, Entomol.* pt. 1. p. 165.
New Holland.
12. PAM. MARO *Fabricius, Ent. Syst. Suppl.* p. 432. (Hesperia M.).
East India.
13. PAM. COROLLER *Boisduval, Faune Ent. de Madagascar*, p. 66. pl. 9. f. 8. (Hesperia C.).
Madagascar.
14. PAM. AUGIAS *Linnaeus, Syst. Nat.* i. ii. p. 794. (Papilio A.); *Fabricius, Mant. Ins.* ii. p. 84.; *Donovan, Ins. Ind.* pl. 48. f. 1. ?; *Latr. Enc. M.* ix. p. 767.; *Hübner, Zutrage*, f. 227, 228. (an *P. Bucephalus Steph.* ?).
East India, Java, (Brazil, Hübner).
15. PAM. PHYLÆUS *Drury, Ill.* i. pl. 13. f. 4, 5, 6. (Papilio P.); *Latr. Enc. M.* ix. p. 767.; *Boisduval et Leconte, Léop. Amér. Septentr.* pl. 78.
Papilio Colon? Fabricius, Mant. Ins. ii. p. 84., *Ent. Syst.* iii. pt. 1. p. 327.
Papilio Vitellius? Fabricius, Ent. Syst. iii. pt. 1. p. 327. (fem.), (not of Abbott & Smith).
Brazil, Antilles.
16. PAM. EPICETUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 330. (Hesperia E.); *Donovan, Ins. Ind.* pl. 48. f. 4.; *Latr. Enc. M.* ix. p. 768.
Urbanus vig. Mys. Hübner, Exot. Samml. Schm. Band 1, pl. —.
Brazil.
17. PAM. MARCHALII *Boisduval, Faune Ent. de Madagascar*, p. 66. (Hesperia M.).
Isle of Mauritius.
18. PAM. ANDRACHNE *Boisduval, Faune Ent. de Madagascar*, p. 67. (Hesperia ? A.).
Madagascar.
19. PAM. EPHEBUS *Hübner, Zutr.* f. 257, 258. (Phemiades E.).
Surinam.
20. PAM. TIBULLUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 336. (Hesperia T.); *Jones, Icones*, vi. t. 76. f. 1.; *Donovan, Ins. Ind.* pl. 47. f. 3.; *Latr. Enc. M.* ix. p. 745.
"In Indiis," Fabricius.
21. PAM. VIBEX *Hübner, Zutr.* f. 685, 686. (Thymelicus V.).
West Indies.
22. PAM. VITELLIUS *Abbott & Smith, Lep. Georgia*, i. f. 17. (Papilio V.) not of Fabricius; *Hübner, Samml. exot. Schm.* Band 11. pl. —. (Thymelicus V.).
? *Pamphila Bucephalus Steph. Haust.* i. p. 102. pl. 10. f. 2.; *Westw. & Humph. Brit. Butt.* pl. 40. f. 1—3.
Georgia.
23. PAM. THAUMAS *Fabricius, Ent. Syst.* iii. pt. 1. p. 327. (Hesperia T.); *Latr. Enc. M.* ix. p. 766. (male).
Hesperia Origenes Fabricius, Ent. Syst. iii. pt. 1. p. 328. (fem. ?); *Jones, Icones*, vi. t. 74. f. 2.; *Donovan, Ins. Ind.* pl. 48. f. 2.
Philadelphia, (Latr.).

24. PAM. ZABULON *Boisduval et Leconte, Lép. Am. Septr.* pl. 76. f. 6, 7. (Hesperia Z.).
United States.
25. PAM. CERNES *Boisduval et Leconte, Lép. Amér. Septentr.* pl. 76. f. 1, 2. (Hesperia C.).
United States.
26. PAM. ARPA *Boisduval et Leconte, Lép. Amér. Septentr.* pl. 68. (Hesperia A.).
United States.
27. PAM. BULENTA *Boisduval et Leconte, Lép. Amér. Septentr.* pl. 67. f. 1—5. (Hesperia B.).
United States.
28. PAM. BRETTUS *Boisduval et Leconte, Lép. Amér. Septentr.* pl. 75. f. 3—5. (Hesperia B.).
United States.
29. PAM. PUSTULA *Hübner, Zutr.* f. 625, 626. (Thymelius P.).
Georgia.
30. PAM. DRURII *Latr. Enc. M.* ix. p. 767. (Hesperia D.).
(Var. fem. ?) Hesp. Phocion *Fabricius, Ent. Syst. Suppl.* p. 431.
United States and South America.
31. PAM. VENEZUELÆ *Westw. MS.* (Pamphila V.); *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 79. f. 5.
Venezuela. Mus. Hewitson.
32. PAM. BION *Fabricius, Ent. Syst. Suppl.* p. 432. (Hesperia B.).
South America.
33. PAM. EXCLAMATIONIS *Fabricius, Ent. Syst.* iii. pt. 1. p. 326. (Hesperia E.).
India.
34. PAM. NUMITOR *Fabricius, Ent. Syst.* iii. pt. 1. p. 324. (Hesperia N.); *Donovan, Ins. Ind.* pl. 44. f. 3.; *Latr. Enc. M.* ix. p. 587. No. 110. (Erycina N.), and p. 776. No. 113. (Hesperia N.).
Thymelicus Puer Hübner, Zutr. f. 275, 276.
Florida, and other parts of the United States.
35. PAM. EDIPUS *Cramer, Pap.* pl. 366. f. E. F. (Papilio E.).
Cape of Good Hope.
36. PAM. ? SATOR *Westw. MS.* (Cyclopides S.); *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 79. f. A. (an H. Edipus *Cramer, p. 366. f. E. F. var. ?*).
Guinea. Mus. Boisduval.
37. PAM. EUPALEMON *Cramer, Pap.* pl. 366. f. A. (Papilio E.); *Hübner, Verz.* No. 722. (Triopades E.).
Surinam.
38. PAM. MALGACHA *Boisduval, Faune Ent. de Madagascar*, p. 67. (Steropes M.).
Tarnatave.
39. PAM. BERNIERI *Boisduval, Faune Ent. de Madagascar*, p. 68. pl. 9. f. 9. (Steropes B.).
Madagascar.
40. PAM. RHADAMA *Boisduval, Faune Ent. de Madagascar*, p. 69. pl. 9. f. 10, 11. (Steropes Rh.).
Madagascar.
41. PAM. HAVEI *Boisduval, Faune Ent. de Madagascar*, p. 64. (Hesperia H.), ditto in *Delegorgue, Voy. S. Afr.* p. 594.
Madagascar, Port Natal.
August 1. 1852.
42. PAM. POUTIERI *Boisduval, Faune Ent. de Madagascar*, p. 65. (Hesperia P.), ditto in *Delegorgue, Voy. S. Afr.* p. 594.
Tintingue, Ste. Marie, Madagascar, Port Natal.
43. PAM. BORBONICA *Boisduval, Faune Ent. de Madagascar*, p. 65. pl. 9. f. 5, 6.
Mauritius, Isle of Bourbon.
44. PAM. HELIRIUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 328. (Hesperia H.); *Cramer, Pap.* pl. 60. f. D.
Surinam.
45. PAM. SATURNUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 328. (Hesperia S.); *Latr. Enc. M.* ix. p. 754.
Cayenne, Brazil.
46. PAM. STRIGA *Hübner, Zutr.* f. 739, 740. (Talides S.).
Rio Janeiro.
47. PAM. SILIUS *Latreille, Enc. M.* ix. p. 764. (Hesperia S.).
Brazil.
48. PAM. PHOEMELAS *Hübner, Zutr.* f. 581, 582. (Celænorrhinus Ph.).
Brazil.
49. PAM. ALETES *Hübner, Zutr.* f. 731, 732. (Thracides A.).
Brazil.
50. PAM. MELIUS *Hübner, Zutr.* f. 755, 756. (Thracides M.).
South America.
51. PAM. ACCIUS *Smith-Abbot, Lep. Georgia*, 1. t. 23. (Papilio A.).
Hesperia Nero var. *Latr. Enc. M.* ix. p. 752.
United States.
52. PAM. MESOGRAMMA *Latr. Enc. M.* ix. p. 765. (Hesperia M.); *Poey, Centurie Lép. Cuba*, pl. 14.
Brazil, Cuba.
53. PAM. ATHENION *Hübner, Samml. exot. Schm. Band 11.* pl. —. (Talides A.).
— ?
54. PAM. THEMISTOCLES *Latr. Enc. M.* ix. p. 769. (Hesperia T.).
Hesperia Phocion *Fabricius, Ent. Syst. Suppl.* p. 431.
South America.
55. PAM. AROGOS *Boisduval et Leconte, Lép. Amér. Septr.* pl. 76. f. 3—5. (Hesperia A.).
United States.
56. PAM. MATHIAS *Fabricius, Ent. Syst. Suppl.* p. 433. (Hesperia M.); *Latr. Enc. M.* ix. p. 751.
Bengal.
57. PAM. GREMIUS *Fabricius, Ent. Syst. Suppl.* p. 433. (Hesperia G.); *Latr. Enc. M.* ix. p. 752. (Bengal ?).
Var. ? Hesperia tripunctata *Latr. Enc. M.* ix. p. 752.
Brazil.
58. PAM. DISU *Kollar in Hugel's Reise d. Kaschmir*, p. 456. (Hesperia D.).
Hesperia Gremius ? *Latr. Enc. M.* ix. p. 752.
Himalaya.
59. PAM. NERO *Fabricius, Ent. Syst. Suppl.* p. 443. (Hesperia N.); *Latr. Enc. M.* ix. p. 752.
Brazil, Antilles, Cuba.

Genus XI. ACHLYODES.

ACHLYODES *Hübner*.
EANTIS *Boisduval*.

Body robust; wings very large, irregular shaped.

Labial Palpi densely hairy, porrected about the length of the head, slightly remote. Terminal joint very slender, horizontal, short, not reaching much beyond the hairs of the second joint.

Antennæ long, slender, gradually thickening from a little beyond the middle, with an elongated slender curved club, with the tip slightly recurved and very acute.

Fore Wings very large, broad, and destitute of pellucid spots. Costal margin sometimes dilated. Apical angle sometimes produced into a point; apical margin considerably dilated in the middle. Veins arranged as in *Pamphila*.

Hind Wings broad, more or less rounded; the anal angle not produced. Outer margin entire. Veins as in *Pamphila*.

Hind Legs (in the males?) with a very long brush of hairs on the inside of the tibiæ near the base. Tibiæ short, with two pairs of spurs. Tarsi long.

The irregular form of the wings, in the species here grouped together, constitute the prominent character of this genus; and it is on this account that I have added to them the curious species represented in Plate LXXIX. f. 8., under the name of *Hesperia sanguinalis*. *A. Thrasybulus*, and some other allied species, seem to approach nearly to *Nisoniades Tages*.

ACHLYODES.

- | | |
|--|--|
| 1. ACH. PALPALIS <i>Latr. Enc. M. ix. p. 792.</i> (<i>Hesperia P.</i>).
Brazil. | 8. ACH. FREDERICUS <i>Hübner, Zutr. f. 611, 612.</i> (<i>Achlyodes F.</i>).
Surinam. |
| 2. ACH. THRASYBULUS <i>Fabricius, Ent. Syst. iii. pt. 1. p. 346.</i> (<i>Hesperia T.</i>); <i>Donovan, Ins. Ind. pl. 49. f. 4.</i> ; <i>Latr. Enc. M. ix. p. 792.</i>
Brazil. | 9. ACH. NEARCHUS <i>Latreille, in Obs. Zool. Humboldt, & Bonpl. pt. ii. pl. 43. f. 3, 4., Enc. M. ix. p. 791.</i> (<i>Hesperia N.</i>).
<i>Antigonus ustus Hübner, Zutr. f. 719, 720.</i>
Brazil. |
| 3. ACH. MITHRIDATES <i>Fabricius, Ent. Syst. iii. pt. 1. p. 336.</i> (<i>Hesperia M.</i>); <i>Donovan, Ins. India, pl. 49. f. 3.</i> ; <i>Latr. Enc. M. ix. p. 792.</i>
Brazil. | 10. ACH. PAUSUS <i>Westw. MS.</i> (<i>Achlyodes P.</i>); <i>Doubl. Westw. & Hewits. Gen. D. L. pl. 80. f. 6.</i> ; (an <i>H. Nearchus Latr. Enc. M. ix. p. 791. fem.?</i>)
Brazil. Mus. Boisduval. |
| 4. ACH. BREISSONII <i>Latreille, Enc. M. ix. p. 792.</i> (<i>Hesperia B.</i>).
Brazil. | 11. ACH. WESTERMANNI <i>Latreille, Enc. M. ix. p. 791.</i> (<i>Hesperia W.</i>).
Brazil. |
| 5. ACH. EROSUS <i>Hübner, Samml. exot. Schm. Band i. pl. —.</i> (<i>Urbanus vetus E.</i>).
Brazil. | 12. ACH. SEBALDUS <i>Fabricius, Mant. Ins. ii. p. 89.</i> (<i>Papilio S.</i>); <i>Latr. Enc. M. ix. p. 791.</i>
<i>Papilio Busiris Cramer, Pap. pl. 261. f. A. B. C.</i> (not of <i>Fabr., Latr. &c.</i>).
Brazil, Surinam. |
| 6. ACH. THRASO <i>Hübner, Samml. exot. Schm. Band i. pl. —.</i> (<i>Urbanus vetus T.</i>); <i>Boisduval, Sp. Gen. Lep. pl. 13. f. 6.</i> (<i>Eantis Th.</i>).
Brazil. | 13. ACH. SANGUINALIS <i>Westw. MS.</i> (<i>Hesperia s.</i>); <i>Doubl. Westw. & Hewits. Gen. D. L. pl. 79. f. 8.</i>
Quito. Mus. Hewitson. |
| 7. ACH. PHALÆNOIDES <i>Hübner, Samml. exot. Schm. Band i. pl. —.</i>
(<i>Urbanus vetus Ph.</i>).
—? | 14. ACH. ? ARCHYTAS <i>Stoll, Suppl. Cram. pl. 5. f. 5, 5 F.</i>
Surinam. |

Genus XII. EUSCHEMON.

EUSCHEMON *E. Doubleday.*HESPERIA *Mac Leay.*

BODY robust; wings large, black, with sulphur coloured markings.

Labial Palpi rather small, broad, scarcely projecting beyond the front hairs of the face. Terminal joint very minute, sub-horizontal.

Antennæ long, thickened beyond the middle into a rather thick fusiform club, and terminated by a long reflexed slender point.

Fore Wings large. Costal margin nearly straight. Apical angle rounded; apical margin convex. Veins arranged as in *Pamphila*; the disco-cellular veins being transverse.

Hind Wings broad, subtriangularly rounded, the base furnished with a bristle (in the males only?), which passes through a ring attached to the under side of the postcostal vein of the fore wings, near the base. Discoidal cell considerably elongated, terminated by a transverse very slender disco-cellular vein.

The type of this genus is a fine Australian insect, which Mr. E. Doubleday regarded as not belonging to the Diurnal Lepidoptera, on account of the possession of the "spring and socket," which is so characteristic of many of the moths. It is indeed true that we know no other Diurnal Lepidopterous insect with this structure, but the veins of the wings are identical with those of the majority of the species of this family, the antennæ also exhibiting a similar resemblance, so that I have no hesitation in considering it as a butterfly belonging to the present family.

EUSCHEMON.

1. EUSCH. RAFFLESIE *Mac Leay* in *King's Survey, Austral. Append.* p. 27. (*Hesperia* R.); *E. Doubleday*, in *Append. to Stokes' Voy. of Discovery*, 1. p. 513. (*Euschemon* R.); *Doubl. Westw. & Hewitts. Gen. D. L.* pl. 80. f. 5. New Holland.

Genus XIII. HESPERIA.

HESPERIA *Fabricius, Swainson (Zool. Ill. 1st ser.).*

General characters of *Pamphila*.

HEAD broad, body robust.

Labial Palpi compressed in front, and incurved, with the sides convex or angulated; the last joint minute, horizontal.

Antennæ of moderate length, or elongated, straight, slender, with a sub-terminal club, variable in length and thickness, but hooked at the tip.

Fore Wings elongated-triangular. Apical margin more or less convex. The costal margin not reflexed, and the disc in the males not marked with the oblique silky patch; often marked with pellucid spots.

Hind Wings subtriangular, with the anal and outer angles rounded, or with the outer margin rounded and sometimes dentated. The anal angle not produced into a prominent lobe or short tail, and the disc beneath not marked with silvery spots.

I have here grouped together a number of species, many of which, it must be admitted, offer such diversities in their general appearance as to render the genus a very artificial one; but, unless the family be cut up even to a greater extent than was proposed by Hübner, I know no more advantageous mode of treating the species. I have, however, adopted various divisions, although it is impossible to be certain as to the location of many of the species, from the insufficient descriptions of the describers.

HESPERIA.

Section I. *Hind Wings rounded, and deeply scalloped.* (*Myscelus* Hübner.)

1. HESP. ERYTHUS Cramer, *Pap.* pl. 59. f. G. (*Papilio* E.); *Latr. Enc. M.* ix. p. 739.
Surinam.
2. HESP. CRAMERI *Latr. Enc. M.* ix. p. 739. (*Hesperia* C.).
Papilio Sebaldis Cramer, *Pap.* pl. 342. f. A. B. (nec Fabricius); *Doubleday, Westw. & Hewits. Gen. D. Lep.* pl. 78. f. 6. (*Myscelus* S.).
Surinam.
3. HESP. SANTHILARIUS *Latr. Enc. M.* ix. p. 737. (*Hesperia* S.); *Perty Delect. Anim. Art. Brasiliae*, pl. —. f. —.
Brazil.
4. HESP. SALUS Fabricius, *Mant. Ins.* ii. p. 88. (*Papilio* S.); *Latr. Enc. M.* ix. p. 737.
Papilio nobilis Cramer, *Pap.* pl. 108. f. A. B.
Surinam.
5. HESP. MOMUS Fabricius, *Mant. Ins.* ii. p. 86. (*Papilio* M.); *Jones, Icones*, 6. t. 90. f. 1.; *Latr. Enc. M.* ix. p. 738.
Papilio vitreus Cramer, *Pap.* pl. 366. f. D.
Guiana, Brazil.

Section II. *Hind Wings rounded and entire.*A. *Fore Wings fasciated.*

6. HESP. ITALUS Hübner, *Zutrage*, f. 249, 250. (*Autochton* L.).
Surinam, Cayenne.
7. HESP. ZAREX Hübner, *Zutrage*, f. 183, 184. (*Cecrops* Z.).
Surinam, Mexico.
8. HESP. NEIS Hübner, *Zutr.* f. 619, 620. (*Cecrops* N.).
Brazil, Cayenne.
9. HESP. CELLUS Boisduval et Leconte, *Lép. Amér. Septentr.* pl. 73.
(*Eudamus* C.).
United States.
10. HESP. FESTUS Hübner, *Zutr.* f. 907, 908. (*Cecrops* F.).
—?
11. HESP. HIARBAS Cramer, *Pap.* pl. 18. f. F. (*Papilio* H.).
Hesperia Celsus Fabricius, *Ent. Syst.* iii. pt. 1. p. 346.;
Jones, Icones, vi. tab. 71. f. 1.; *Latr. Enc. M.* ix. p. 759.; *Donovan, Ins. India*, pl. 52. f. 3.
Hesperia (U.) *Thyrsis* Fabricius, *Ent. Syst.* iii. pt. 1. p. 333.?
Brazil.
12. HESP. CLONIAS Fabricius, *Mant. Ins.* ii. p. 87. (*Papilio* C.); Cramer,
Pap. pl. 80. f. C. D.; *Latr. Enc. M.* ix. p. 758.
Brazil.
13. HESP. BRONTES Fabricius, *Ent. Syst.* iii. pt. 1. p. 335. (*Hesperia* B.);
Latr. Enc. M. ix. p. 759.
Brazil.
14. HESP. CLERICUS Fabricius, *Ent. Syst.* iii. pt. 1. p. 339.
South America.
15. HESP. PAPINIANUS Poey, *Centurie Lép. Cuba*, pl. 4. (*Hesperia* P.).
Cuba.
16. HESP. CICERO Fabricius, *Ent. Syst.* iii. pt. 1. p. 358. (*Hesperia* C.);
Latr. Enc. M. ix. p. 787.
Papilio Folus Cramer, *Pap.* pl. 74. f. F.?
Java (Surinam, Cramer).
17. HESP. LEUCOMELAS Hübner, *Zutr.* f. 623, 624. (*Cobalus* L.).
South America.
18. HESP. LEUCOCERA Kollar in *Hugel's Reise d. Kaschmir, App.* p. 454.
pl. 18. f. 3, 4. (*Hesperia* L.).
Himalaya.
19. HESP. FATIH Kollar in *Hugel's Reise d. Kaschmir, App.* p. 454. pl.
18. f. 5, 6. (*Hesperia* F.).
Himalaya.
20. HESP. ZEPHODES Hübner, *Samm. exot. Schm.* Band ii. pl. —. (*Oleides* Z.).
—?
21. HESP. AMPHION Hübner, *Zutr.* f. 631, 632. (*Proteides* A.).
West Indies.
22. HESP. PAULINUS Cramer, *Pap.* pl. 391. f. G. H. (*Papilio* P.).
—?
23. HESP. PRODICUS Stoll, *Suppl. Cramer*, pl. 33. f. 6.
Cape of Good Hope.
24. HESP. DAUNUS Cramer, *Pap.* pl. 126. f. F.
Surinam.
25. HESP. PELOPIDAS Fabricius, *Ent. Syst.* iii. pt. 1. p. 350. (*Hesperia* P.); *Jones, Icones*, vi. t. 27. f. 2.; *Donovan's Drawings in Bibl. Hope, Oxford*; *Latr. Enc. M.* ix. p. 764.
"In Indiis" (Fabricius).
26. HESP. CÆSAR Fabricius, *Ent. Syst.* iii. pt. 1. p. 340. (*Hesperia* C.);
Jones, Icones, vi. t. 79. f. 4.; *Donovan's Drawings in Bibl. Hope, Oxford*; *Latr. Enc. M.* ix. p. 755.
"In Indiis" (Fabricius).
27. HESP. NELEUS Linnæus, *Syst. Nat.* i. ii. p. 792., *Mus. Lud. Utr.* p. 260. (*Papilio* N.); *Fabricius, Ent. Syst.* iii. pt. 1. p. 318.; *Clerck, Icones*, t. 45. f. 2, 4.
Papilio Hemes? *Fabricius, Mant. Ins.* ii. p. 89.; *Cramer, Pap.* pl. 103. f. F.; *Latr. Enc. M.* ix. p. 79.
Hesperia Clito? *Fabricius, Ent. Syst.* iii. pt. 1. p. 353.
Papilio Phoreus Cramer, *Pap.* pl. 156. f. D. var.?
Brazil, Guiana.
28. HESP. CURTIUS Fabricius, *Ent. Syst.* iii. pt. 1. p. 354. (*Hesperia* C.);
Jones, Icones, vi. pl. 70. f. 1.; *Donovan's Drawings in Bibl. Hope, Oxford*; *Latr. Enc. M.* ix. p. 756.
An var. *Virbii*?
Surinam.
29. HESP. SENECA Latreille, *Enc. M.* ix. p. 756. (*Hesperia* S.).
Brazil.
30. HESP. CLAUDIANUS Latreille, *Enc. M.* ix. p. 756. (*Hesperia* C.).
Brazil.
31. HESP. VIRBIUS Fabricius, *Mant. Ins.* ii. p. 92. (*Papilio* V.); Cramer,
Pap. pl. 143. f. F.; *Latr. Enc. M.* ix. p. 755.
Surinam, Brazil.

32. HESP. ADRASTUS *Cramer, Pap.* pl. 319. f. F. G. (Papilio A.); *Latr. Enc. M.* ix. p. 752.
— ?
33. HESP. ELIGIUS *Cramer, Pap.* pl. 354. f. H. (Papilio E.); *Latr. Enc. M.* ix. p. 752.
Brazil.
34. HESP. FLACCUS *Fabricius, Ent. Syst. Suppl.* p. 434. (Hesperia F.); *Latr. Enc. M.* ix. p. 753.
East India.
35. HESP. JACCHUS *Fabricius, Mant. Ins.* ii. p. 88. (Papilio J.); *Donovan, Ins. N. Holl.* pl. 31. f. 1.; *Latr. Enc. M.* ix. p. 752.
Trapezites Symmnomus *Hübner, Zutrage*, f. 225, 226.
New Holland, Botany Bay.
36. HESP. ATTICUS *Fabricius, Ent. Syst.* iii. pt. 1. 339.
India.
37. HESP. ? PYGMÆUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 354. (Hesperia P.); *Donovan's Drawings in Bibl. Hope, Oxford.*
India.
-
- Sect. 3. Hind Wings more or less triangular.
38. HESP. THRAX *Linnaeus, Syst. Nat.* i. ii. p. 794. (Papilio T.); *Fabricius, Mant. Ins.* ii. p. 87. ?; *Donovan, Ins. India*, pl. 49. f. 2.; *Latr. Enc. M.* ix. p. 748.; *Hübner, Zutr.* f. 875, 876. (Celænorrhinus T.).
Java, India.
39. HESP. CEBRENUS *Cramer, Pap.* pl. 178. f. G. (Papilio C.); *Latr. Enc. M.* ix. p. 761.
Surinam.
40. HESP. LYCIDAS *Smith & Abbot, Lep. Georgia*, i. pl. 20. (Papilio L.); *Latr. Enc. M.* ix. p. 751.; *Boisduval et Leconte, Lép. Amér. Septr.* pl. 71. (Eudamus L.).
Proteides Lyciades *Hübner, Zutr.* f. 621, 622.
North America (Bahia, Hübner).
41. HESP. FLESUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 338. (Hesperia F.).
Æquinoctial Africa.
42. HESP. TRIANGULARIS *Hübner, Zutr.* f. 509, 510. (Cobalus Tr.).
Brazil.
43. HESP. SCURRA *Hübner, Samml. exot. Schm.* Band i. pl. —. (Urbanus juvenis S.).
— ?
44. HESP. NITOCRIS *Cramer, Pap.* pl. 393. f. F. G. (Papilio N.).
Surinam.
45. HESP. OPHION *Stoll, Suppl. Cram. Pap.* pl. 26. f. 4. (Papilio O.); *Drury, Ill.* vol. iii. pl. 17. f. 1, 2.; *Boisduval, Faune Madag.* p. 62. pl. 9. f. 4.
Guinea, Madagascar, Sierra Leone.
46. HESP. POLYGIUS *Latr. Enc. M.* ix. p. 745. (Hesperia P.).
Brazil.
47. HESP. LUCIFER *Hübner, Zutr.* f. 579, 580. (Celænorrhinus L.).
Surinam.
48. HESP. HAWORTHIANA *Swainson, Zool. Ill.* 1st series, i. pl. 28.
Southern Brazil.
49. HESP. ITEA *Swainson, Zool. Ill.* 1st series, i. pl. 39.
Brazil.
50. HESP. CYNISCA *Swainson, Zool. Ill.* 1st series, i. pl. 40.
Southern Brazil.
51. HESP. HYLASPES *Cramer, Pap.* pl. 365. f. I. K. (Papilio H.); *Latr. Enc. M.* ix. p. 753.
— ?
52. HESP. MARCUS *Fabricius, Mant. Ins.* ii. p. 87. (Papilio M.), *Ent. Syst.* iii. pt. 1. p. 338.; *Latr. Enc. M.* ix. p. 753.; *Hübner, Zutr.* f. 725, 726. (Cobalus M.).
Papilio Phyllus *Cramer, Pap.* pl. 176. f. B. C.
Brazil, Guiana.
53. HESP. JOLUS *Cramer, Pap.* pl. 392. f. J. K. (Papilio J.).
Guiana.

SPECIES OF HESPERIDÆ OF DOUBTFUL LOCATION.

1. HESP. SILVIUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 342.
Cape of Good Hope.
2. HESP. MÆVIUS *Fabricius, Ent. Syst.* iii. pt. 1. p. 352.; *Latr. Enc. M.* ix. 787.
East India.
3. HESP. REMUS *Fabricius, Ent. Syst. Suppl.* p. 434.; *Latr. Enc. M.* ix. p. 760.
Cayenne.
4. HESP. MENESTRIESII *Latr. Enc. M.* ix. p. 760.
Brazil.
5. HESP. POMPEIUS *Latr. Enc. M.* ix. p. 765.
Brazil.
6. HESP. CORNELIUS *Latr. Enc. M.* ix. p. 764.
Cuba, Brazil ?
August 1. 1852.
7. HESP. JULIANUS *Latr. Enc. M.* ix. p. 763.
Java.
8. HESP. PERONII *Latr. Enc. M.* ix. p. 763.; *Boisduval, Voy. Astrolabe, Entomol.* pt. 1. p. 164. (Telesto P.).
New Holland.
9. HESP. NASO *Fabricius, Ent. Syst. Suppl.* p. 431.; *Latr. Enc. M.* ix. p. 763.
Bengal, Isle of France.
10. HESP. PAPYRIA *Boisduval, Voy. Astrolabe, Entomol.* pt. 1. p. 166.
New Holland.
11. HESP. INCONSPICUA *Bertolini in Trans. Acad. Sci. Bologna*, 1849, p. 15.
Mozambique.
12. HESP. CLAVUS *Erichson in Schomburgk's Reise Guiana*, iii.
British Guiana.

- | | |
|---|---|
| <p>13. HESP. (THYMELE) <i>DICHROA</i> <i>Boisduval, Voy. Astrolabe, Entomol. pt. 1.</i>
 p. 160.; <i>Guérin, Voy. Coquille, Zool. p. 282.</i>
 <i>Hesperia Antipodes Guérin, Voy. Coq. Atlas, Ins. pl. 18.</i>
 f. 7.
 Dory, New Guinea.</p> <p>14. HESP. (THYMELE) <i>ODIX</i> <i>Boisduval, Voy. Astrolabe, Entomol. pt. 1.</i>
 p. 160.; <i>Guérin, Voy. Coquille, Zool. p. 282.</i>
 <i>Hesperia Critomedia Guérin, Voy. Coquille, Atlas. Ins.</i>
 pl. 18. f. 6.
 Offack, Papua.</p> <p>15. HESP. (THYMELE) <i>PHALOS</i> <i>Boisduval, Voy. Astrolabe, Entomol. pl. 1.</i>
 p. 163.
 New Guinea.</p> <p>16. HESP. (THYMELE) <i>TRITON</i> <i>Boisduval, Voy. Astrolabe, Entomol. pl. 1.</i>
 p. 160.
 New Guinea.</p> | <p>17. HESP. (THYMELE) <i>LUGUBRIS</i> <i>Boisduval, Voy. Astrolabe Entomol.</i>
 pt. 1. p. 161.
 Dory, New Guinea.</p> <p>18. HESP. (THYMELE) <i>THRIDAS</i> <i>Boisduval, Voy. Astrolabe, Entomol. pt. 1.</i>
 p. 161.
 Bourou.</p> <p>19. HESP. (THYMELE) <i>ORIDA</i> <i>Boisduval, Voy. Astrolabe, Entomol. pt. 1.</i>
 p. 162.
 Offack.</p> <p>20. HESP. (THYMELE) <i>DIRPHA</i> <i>Boisduval, Voy. Astrolabe, Entomol. pt. 1.</i>
 p. 162.
 New Ireland.</p> |
|---|---|

ADDITIONAL SPECIES.

STEROPES ARGYROSTIGMA *Eversmann, Bull. Soc. Nat. Mosc. 1851, p. 624.*
 Irkoutzk.

ADDITIONS AND CORRECTIONS.

Page 4. ORNITHOPTERUS POSEIDON, n. 3. *Westw. Cab. Orient. Ent.* pl. 11. male, pl. 14. female.

9. PAPILIO MINEREUS, n. 16. *Westw. Cab. Orient. Ent.* pl. 40. f. 1.
 „ PAP. PHILOXENUS, n. 14. *Westw. Cab. Orient. Ent.* pl. 49. f. 2, 3, 4, 5.

10. PAP. ELEPHENOR *E. Doubleday*, n. 36.; *Westw. Cab. Orient. Ent.* pl. 31. f. 2, 2*.

11. PAP. HELENUS, n. 57. *Linn. Syst. Nat.* II. p. 745., not 754.

12. PAP. DEMOLEUS, n. 70. *Linn. Syst. Nat.* I. II. p. 753. n. 46., not 47.

„ PAP. DRUSIUS, n. 80. *Cramer*, pl. 229., not 227.

14. PAP. EVAN *E. Doubl.* n. 104. pl. 2. fig. 2. (fem.), *Westw. Cab. Orient. Ent.* pl. 31. fig. 1, 1* (male).

15. PAP. ZANCLEUS *Zeller, Isis*, 1847, p. 213. (P. Podalirius var.? n. 124.)
 Messina.

„ PAP. FEISTHAMELII. See as to this insect being a geographical variety of P. Podalirius, antè p. 15. n. 125.; *Lucas* in *Ann. Soc. Ent. France*, 1850, p. 84.

„ PAP. HIPPODAMUS, n. 134. = P. Servillei, p. 16. n. 153. The former name sinks into a synonym.

16. PAP. SERVILLEI, n. 153. = P. Hippodamus, n. 134., and also P. Columbus, *Kollar, Beitr. z. Ins. Faun. N. Granada*, p. 1. pl. 1. f. 1, 2.

„ PAP. ASTERIAS, n. 161. *Cramer, Pap.* pl. 385. f. C. D.

17. PAP. PIRITHOUS, n. 175. is regarded by Mr. Hewitson (*Trans. Ent. Soc. n. s. I.* 97.) as the female of P. Lycophron, n. 167. Both are from Brazil.

„ PAP. ACAMAS, n. 176. is also regarded by Mr. Hewitson (loc. cit.) as the female of P. Thersites, n. 166. Both are from Jamaica.

„ PAP. CEBALUS, n. 177. is also regarded by Mr. Hewitson (loc. cit.) as the female of P. Pallas *Doubl.* n. 168

„ PAP. PELAEUS, n. 179. *Westw. Arc. Ent.* I. pl. 18. f. 1, 2.

18. PAP. ARCAS, n. 195., according to Messrs. Bates and Wallace, is the female of P. Proteus, n. 201. (male).

„ PAP. TULLUS, n. 201., according to Messrs. Bates and Wallace, is the female of P. Sesostrius, n. 213.

„ PAP. ÆNEAS, n. 202., *Cramer*, pl. 279., not 379.

According to M. Chavannes (*Bull. Soc. Vaudoise, Sci. Nat.* III. n. 20.) :—

„ PAP. NEPHALION *Boisd.* n. 199. is the female of P. Proteus, n. 201 ♂;

„ PAP. DEMAS *Boisd.* n. 211. ♀ is the female of P. Polymetus, n. 212., and

„ PAP. TROS *Boisd.* n. 194. is the female of P. Dardanus, n. 194.

„ PAP. EURYMAS *Godart, Enc. M.* IX. p. 34. n. 27.; *Boisduval, Sp. Gén. Lép.* p. 284. n. 110.

Pap. Lysander *Cramer, Pap.* pl. 29. f. C. D.; *Hübner, Exot. Samml.* (not of Fabricius).

Cayenne, Surinam. (Allied to P. Zacynthus.)

19. PAP. EURISTEUS *Cramer, Pap.* pl. 29. f. F.; *Boisduval, Sp. Gén. Lép.* p. 282.

Pap. Hippason var. *Godart, Enc. M.* IX. p. 35.

Surinam.

21. PAP. PARADOXUS, antè, p. 21. n. 268. *Westw. Cab. Orient. Ent.* pl. 9. f. 1, 1*.

Java.

„ PAP. TARQUINIUS *Boisduval, Sp. Gén. Lép.* p. 296.

Colombia. (Allied to P. Tullus and Vertumnus.)

„ PAP. PHRONIUS *Lucas* in *Guér. Rev. Zool.* 1852, p. 489.

Cayenne. (Allied to P. Tullus.)

„ PAP. ZEUXIS *Lucas* in *Guér. Rev. Zool.* 1852, p. 190.

Venezuela. (Allied to P. Tullus.)

„ PAP. BOCHUS *Lucas* in *Guér. Rev. Zool.* 1852, p. 191.

Cayenne. (Allied to P. Vertumnus and Tullus.)

„ PAP. ORBIGNYANUS *Lucas* in *Guér. Rev. Zool.* 1852, p. 192. pl. 10.

f. 3.

Corrientes. (Allied to P. Tullus.)

„ PAP. GAYI *Lucas* in *Guér. Rev. Zool.* 1852, p. 193

Cusco. (Allied to P. Æneas.)

Page 21. PAP. NEODAMAS *Lucas* in *Guér. Rev. Zool.* 1852, p. 193. pl. 10. f. 5.

Antilles. (Allied to P. Polydamas.)

„ PAP. ICARIUS *Westw. Cab. Orient. Ent.* pl. 2.

Assam. (Allied to P. Bootes.)

„ PAP. CORRINEUS *Bertolini, Lep. Mozamb.* (*Trans. Acad. Bologna*, 1849.).

Mozambique.

„ PAP. PAUSANIAS *Hewitson, Trans. Ent. Soc.* n. s. II. p. 22. pl. 6 f. 2.

Surinam and River Amazon. (Allied to P. Choridamus *Boisd.*)

„ PAP. CHABRIAS *Hewitson, Trans. Ent. Soc.* n. s. II. p. 23. pl. 6. f. 1.

River Amazon. (Allied to P. Triopas.)

„ PAP. ORELLANA *Hewitson, Trans. Ent. Soc.* n. s. II. p. 23. pl. 5. f. 2.

River Amazon.

„ PAP. SAKONTALA *Hewitson, Trans. Ent. Soc.* n. s. II. p. 24. pl. 5. f. 1.

Sylhet. (Allied to P. Polytes.)

„ PAP. BOLIVAR *Hewitson, Trans. Ent. Soc.* n. s. I. p. 97. pl. 10. f. 2.

River Amazon. (Allied to P. Vertumnus.)

„ PAP. COLUMBUS *Hewitson*, op. cit. p. 98. pl. 10. f. 1.

River Amazon. (Allied to P. Dolicaon.)

„ PAP. EROSTRATUS *Westw. Trans. Ent. Soc.* v. p. 36. pl. 3. f. 2, 2*.

Central America. (Allied to P. Acamas.)

„ PAP. ZETES *Westw. Trans. Ent. Soc.* v. p. 36. pl. 3. f. 1, 1*.

St. Domingo.

„ PAP. GODARTIANUS *Lucas* in *Guér. Rev. Zool.* 1852, p. 129.

Islands of Pacific Ocean. (Near P. Polydorus *Linn.*)

„ PAP. CELADON *Lucas*, op. cit. 1852, p. 130.

North America. (Near P. Sinon. *Fab.*, with which it is

confounded by *Cramer*.)

„ PAP. ARCESILAUS *Lucas*, op. cit. 1852, p. 131.

North America. (Near P. Ajax.)

„ PAP. CACIUS *Lucas*, op. cit. 1852, p. 132.

Colombia. (Near P. Grayi and Cleotas.)

„ PAP. SADALUS *Lucas*, op. cit. 1852, p. 133.

Quito. (Near P. Machaon and Asterias.)

„ PAP. EURYDORUS *Lucas*, op. cit. 1852, p. 135.

St. Catherine, Brazil. (Near P. Pronesus and Phryneus.)

„ PAP. PHRYNEUS *Lucas* in *Guér. Rev. Zool.* 1852, p. 136.

Cayenne. (Near P. Pronesus and Agavus.)

„ PAP. ZELICAON *Lucas*, op. cit. 1852, p. 136

California. (Near P. Machaon.)

„ PAP. RUTULUS *Lucas*, op. cit. 1852, p. 138.

California. (Near P. Turnus.)

„ PAP. EURYMEDON, *Lucas*, op. cit. 1852, p. 140.

California. (Near P. Rutulus.)

„ PAP. AGATHOCLES *Kollar, Beitr. z. Ins. N. Granada (Mem. Acad. Vienna)*, I. p. 2.

Venezuela. (Allied to P. Eurymedes, *Cramer, Boisd.*)

„ PAP. PHENON *Kollar*, op. cit. p. 3. t. 1. f. 5, 6.

New Granada. (Allied to P. Rhesus *Klug.*, and Proteus,

Boisd.)

„ PAP. VARUS *Kollar*, op. cit. p. 4. t. 1. f. 3, 4.

New Granada. (Allied to P. Crassus.)

„ PAP. AMERICUS *Kollar*, op. cit. p. 5.

New Granada. (Allied to P. Actenias, *Boisd.*)

„ PAPILIO ZAGREUS *E. Doubleday, Ann. Nat. Hist.* XIX. p. 174.

Gen. D. Lep. pl. 1*, f. 1.

Venezuela. B. M.

„ PAP. CAUNUS *Westw. Cab. Orient. Ent.* pl. 9. f. 2, 2*.

Java? (Allied to P. Paradoxus.)

„ PAP. ASTINA *West. Cab. Orient. Ent.* pl. 9. f. 3.

Java. (Allied to P. Paradoxus.)

„ PAP. TELEARCHUS *Hewitson, Trans. Ent. Soc.* n. s. II. p. 22. pl. 6. f. 3.

Sylhet. (Closely allied to P. Paradoxus.)

Page 25.

Genus SERICINUS.

Westw. *Trans. Ent. Soc.* n. s. i. p. 173.

Labial Palpi nearly double the length of the head, nearly horizontally porrected, hirsute (not clothed with long bristles).

Antennae only slightly clavate, about thirty-jointed, gradually thickening.

Fore Wings triangularly-ovate, rounded at the tip. Postcostal vein four-branched: branches simple; the first and second arising before the extremity of the discoidal cell, the third from its apex, and the fourth in the middle of the space between its apex and the tip of the wing. Upper disco-cellular vein very short; the middle one much longer, annulated in the middle: lower disco-cellular shorter, being almost contiguous with the extremity of the median vein.

Hind Wings suboval, with the third branch of the median vein produced into a very long and narrow tail; at the base of the wing is a minute prædiscoidal cell.

Type. PAP. TELAMON Donovan, antè, p. 25. n. 139.

Obs. Three other very closely allied supposed species have also been recently brought from the North of China, which have been described by Mr. G. R. Gray, in the volume of the "Illustrated Proceedings of the Zoological Society" for the present year, not yet published. One of these supposed species is represented in our supplemental Plate, under the name of SERICINUS TELAMON.

Page 27. PARNASSIUS (ISMENE) HELIOS Nickerl. p. 27. n. 11., has been generically named Hypermnestra, and a variety figured by Ménétries, *Ins. rec. p. Lehmann*, t. 6. f. 1.

" PARN. NORDMANNI Ménétries, MS.; Nordmann, *Bull. Soc. Nat. Mosc.* 1851, p. 423. pl. 13. fig. 1—3.

Caucasus.

" PARN. PATAREUS Nordm. Doritis Clarius H.-Schäffer, *Suppl. f. 257—258.*, not of Eversmann, antè, p. 27. n. 5.

" PARN. APOLLONIUS Eversmann, *Bull. Mosc.* 1847, n. 3. p. 71. tab. 3. fig. 1, 2.

Siberia.

" PARN. HESEBOLUS Mannerheim MS. P. Apollo var? Nordm. *Bull. Mosc.* 1851, p. 425.

Mongolia.

" PARN. TENEDIUS Eversmann, *Bull. Soc. Nat. Mosc.* 1851, p. 621. Irkoutzk.

" PARN. STUBBENDORFII Ménétries, *Ins. rec. p. Lehmann*, t. 6. f. 2. Russia, Chorma. (P. Mnemosyne var.?)

Obs. A revision of the family Papilionidæ, by Mr. G. R. Gray, with figures of a great number of new and previously unfigured species, is in the press.

Page 34. EUCHÉIRA SOCIALIS. The remarkable insect, from Mexico, which I have described and figured in the "Transactions of the Entomological Society of London" (i. p. 44. pl. 6.), under this name, the larvæ of which form and inhabit a large bag-like nest, within which the chrysalides are simply suspended and not girt across the middle, appears to me to be very closely allied to the genus Euterpe, the transformations of which are unknown. Should Euterpe prove, as is possible, to have simply suspended chrysalides, it will form, with Euchéira, a passage to the Nymphalidæ, instead of that to Papilionidæ, as arranged in this work.

" EUTERPE LEUCODROSIME Kollar, *Beitr. z. Ins. N. Granada*, (*Mém. Acad. Vienna*) i. p. 8. t. 3. f. 3, 4.

New Granada. (Allied to E. Charops and Antodyca, Boisd.)

" EUT. RADIATA Kollar, op. cit. i. p. 9. t. 4. f. 3, 4.

Venezuela. (Allied to E. Nimbee, Polydama, Bithys, &c.)

" EUT. EXCLAMATIONIS Kollar, op. cit. p. 9. pl. 4. f. 5, 6.

Venezuela.

" EUT. CHRYSOLOPHA Kollar, op. cit. p. 9. pl. 4. f. 7, 8.

Venezuela.

" EUT. CESAREA Lucas in *Guér. Rev. Zool.* 1852, p. 194. Colombia. (Allied to P. Charops.)

" EUT. NOTHA Lucas in *Guér. Rev. Zool.* 1852, p. 195. Venezuela.

" EUT. HEBRA Lucas in *Guér. Rev. Zool.* 1852, p. 196. Colombia. (Allied to E. Nimbee.)

" EUT. CORA Lucas in *Guér. Rev. Zool.* 1852, p. 197. Cusco. (Allied to P. Nimbee.)

37. LEPTALIS PHRONIMA n. 22=Pap. Licinia Cram. pl. 153. f. E.?

" LEP. MEDORA E. Doubleday, antè, p. 37. n. 26.=L. Casta Kollar, *Beitr. z. Ins. N. Granada*, (*Mém. Acad. Vienna*), i. p. 10. pl. 4. f. 9, 10.

" LEP.? PENTHICA Kollar, op. cit. p. 10. pl. 4. f. 11, 12.

New Granada.

" LEP. ACRÉOIDES Hewitson, *Trans. Ent. Soc.* n. s. pt. i. p. 99. pl. 11. f. 1.

Minas Geraes.

41. PONTIA ALCESTA, n. 3.=Pont. Narica Doubl. Westw. & Hewits. *Gen. D. L.* pl. 5. f. 5.

44. PIERIS EGIALEA, n. 4. Cramer, pl. 258. not 253.

45. PI. PHILYRA, n. 26. Cramer, pl. 339. not 329.

Page 46. PI. CORONEA, n. 52. Cramer, pl. 361. not 360.

47. PI. AGATHINA, n. 778 Cramer, p. 237. f. D. E. not E. F.

51. PI. AGOSTINA Hewitson, *Exot. Butt.* pt. iii. pl. 7. f. 1, 2.

East India. (Allied to P. Eucharis.)

" PI. NERA Hewitson, *Exot. Butt.* pt. iii. pl. 7. f. 3, 4.

Quito. (Allied to P. Hirlanda Stoll=? P. Helvia Humb. & Bonpl.)

" PI. MALENKA Hewitson, *Exot. Butt.* pt. iii. pl. 7. f. 5, 6.

Venezuela. (Allied to P. Pyrrha.)

" PI. LORENA Hewitson, *Exot. Butt.* pt. iii. pl. 7. f. 7.

Quito. (Allied to P. Pyrrha and P. Malenka.)

" PI. LYPERA Kollar, *Beitr. z. Ins. N. Granada*, (*Mém. Acad. Vienna*),

pt. i. p. 11. pl. 4. f. 1, 2.

New Granada.

" PI. CATOGRAMMA Kollar, op. cit. p. 11.

New Granada. (Near P. Anguitia Godart.)

" PI. PHAOLA E. Doubleday, *Ann. Nat. Hist.* pt. xx. p. 63.

Fernando Po. (Mus. Soc. Zool.)

" PI. MATUTA E. Doubleday, *Ann. Nat. Hist.* vol. xx. p. 64.

Fernando Po.

" PI. BRASSICOIDES Guérin-Ménéville, *Voy. en Abyssinie*, t. vi.

p. 365. pl. 9. f. 3—6.

Abyssinia. (Allied to P. Brassicæ.)

" PI. MANNII Mayer in *Ent. Zeitung Stettin*, 1851, p. 151. (Pontia Mannii).

Splato.

57. ANTHOCHARIS EUPOMPE, n. 18.=Pap. Evippe ♀ Cramer, pl. 91.

f. D. E.?

" ANTH. LEVAILLANTH Lucas, *Hist. Nat. An. art. Algér.* iii. p. 348.

pl. 2. f. 1.; *Ann. Soc. Ent. France*, 1847, *Bull.* p. xlix.

1850, pl. 2. f. 1 a. 1 b.

Algeria. (Nearly allied to A. Charlonia.)

" ANTH. NOUNA Lucas, *Hist. Nat. An. art. Algérie*, iii. p. 350.

pl. 1. f. 2.

Algeria.

58. ANTH. IONE, antè, p. 58. n. 36. Reiche, *Voy. Abyssin.* (Ferret)

Entomol. p. 457. pl. 30. f. 1—8.

" ANTH. EXOLE Reiche, *Voy. Abyss.* (Ferret) *Entomol.* p. 460.

pl. 31. f. 4—6.

Senegal, Arabia, Abyssinia.

59. IDMAIS VESTA Reiche, *Voy. Abyss.* (Ferret) *Entomol.* p. 463. pl. 31.

f. 7, 8.

Abyssinia.

65. ERONIA ARGIA, n. 8.=Pap. Casseopeia Cramer, pl. 201. not 210.

" ER. LEDA E. Doubleday, antè, p. 65. n. 6.

Dryas * Leda Boisdual, *Voy. de Delegorgue*, ii. p. 588;

Guérin-Ménéville, *Voy. en Abyssinie*, tom. vi. p. 367.

pl. ix. f. 1, 2.

Anthocharis Tekoukoule Guérin, olim.

Abyssinia, Caffraria, Natal.

67. CALLIDRYAS PYRANTHE, n. 4=Pap. Alcyone Cramer, pl. 58. f. C.

68. CAL. PHILEA, n. 11.=P. Melanippe Cramer, pl. 361. not 341.

71. GONEPTERIX WALLICHI E. Doubleday in *Trans. Ent. Soc.* v.

p. xlvii.

Northern India.

" GON. FARINOSA Zeller, *Isis*. 1847. p. 5.

Maeri.

75. COLIAS ERYTHROGRAMMA Kollar, *Beitr. z. Ins. N. Granada*, (*Mém.*

Acad. Vienna), i. p. 13. pl. 4. f. 13, 14.

New Granada. (Near C. Chrysotheme.)

" COL. TAMARA Nordmann, *Bull. Soc. Nat. Mosc.* 1851, p. 413. tab.

xi. f. 2, 3.

Trans.—Caucasus.

" COL. CHRYSOCOMA Eversmann, *Bull. Soc. Nat. Mosc.* 1851,

p. 622.

Col. Thisoa Ménétries, *Cat. Rais.* p. 244.?

Caucasus. (Near C. Aurora.)

" COL. MELINOS Eversmann, *Bull. Mosc.* 1847, ii. p. 72. pl. 3.

f. 3—6.

Eastern Siberia.

" COL. CHLOE Eversmann, *Bull. Mosc.* 1847, ii. p. 72. pl. 4.

f. 1—4.

Eastern Siberia.

78. TERIAS. See Chavannes in *Bull. Soc. Vaudoise, Sc. Nat.* iii.

n. 21., on Terias Leuce, Tenella, and Gentilis. He also

gives T. Sinoe Boisd. antè, p. 80. n. 50. as a var. of T.

Albula, n. 49., and T. Bephos, antè, p. 80. n. 52. as a var.

of T. Elvina, n. 51.

80. TER. FLAVESCENS Chavannes in *Bull. Soc. Vaudoise, Sc. Nat.* iii.

n. 21.

St. Paul, Brazil.

" TER. PALLIDA Chavannes, op. cit.

St. Paul, Brazil.

" TER. XANTHOCLOREA Kollar, *Beitr. z. Ins. N. Granada*, (*Mém. Acad.*

Vienna), i. p. 13.

New Granada. (Near T. Arbela Boisd.)

- Page 80. TERIAS DEFLORATA Kollar, op. cit. p. 14.
New Granada. (Near T. Albula Boisd.)
88. EUPLOEA DEIONE Westw. Cab. Orient. Entomol. pl. 37. f. 3.
Assam.
92. DANAI PHILENE, n. 17. Cramer, pl. 375. not 275.
93. DAN. TYTIA, n. 35.=Danais Tita Kollar in Hugel's Reise n. Kaschmir, App. 424. tab. 6.
94. HESTIA HYPERMNESTRA Westw. Cab. Orient. Entomol. pl. 37. f. 1.
Borneo. B. M.
- „ HEST. BELLA Westw. Cab. Orient. Entomol. pl. 37. f. 2.
Java. B. M.
- „ HEST. JASONIA Westw. Cab. Orient. Entomol. pl. 42. f. 1.
Ceylon. B. M.
95. HEST. IDEA, n. 7. Cramer, pl. 362. f. D. (var.)?
104. HELICONIA METHARME Erichson in App. Schomb. Reise Brit. Guiana.
British Guiana.
- „ HEL. ASTYDAMIA Erichson, op. cit.
British Guiana.
- „ HEL. ELIMÆA Erichson, op. cit.
British Guiana.
- „ HEL. LYCASTE, n. 50.; Donovan's Drawings in Bibl. Hope, Oxford.
125. ITHOMIA DOTO Hübner, Samml. exot. Schm.; Verz. bek. Schm. p. 9. n. 5.
127. ITH. ONEGA Hewitson, Exot. Butterflies, No. 1. pl. 1. f. 1.
River Amazon.
- „ ITH. ILLINISSA Hewitson, Exot. Butt. No. 1. pl. 1. f. 2.
River Amazon.
- „ ITH. SAREPTA Hewitson, Exot. Butt. No. 1. pl. 1. f. 3.
River Amazon.
- „ ITH. EGRA Hewitson, Exot. Butt. No. 1. pl. 1. f. 4.
An. Pap. Flora Cramer, var.?
River Amazon.
- „ ITH. GALITA Hewitson, Exot. Butt. No. 1. pl. 1. f. 5.
River Amazon.
- „ ITH. SISERA Hewitson, Exot. Butt. No. 1. pl. 1. f. 6.
River Amazon.
- „ ITH. ELIA Hewitson, Exot. Butt. pt. 3. pl. 8. f. 1.
River Amazon. (Allied to Ith. Illinissa Hewits. Exot. Butt.)
- „ ITH. PATILLA Hewitson, Exot. Butt. pt. 3. pl. 8. f. 2.
Mexico.
- „ ITH. LEILA Hewitson, Exot. Butt. pt. 3. pl. 8. f. 3.
Mexico.
- „ ITH. FIAMMETTA Hewitson, Exot. Butt. pt. 3. pl. 8. f. 4.
South America. (Belongs to the G. Sais E. Doubleday.)
- „ ITH. THEA Hewitson, Exot. Butt. pt. 3. pl. 8. f. 5.
River Amazon. (Allied to N. Ninonia Hb.)
- „ ITH. TUTIA Hewitson, Exot. Butt. pt. 3. pl. 8. f. 6.
River Amazon.
130. MECHANITIS EGINA, n. 14. not Pap. Eg. Cramer, pl. 39. f. F. G. (and our page 141. Acræa Eg.), and=P. Ludovica Cram. pl. 297. f. E.
138. Lines 33 and 40 for Acræa Terpsichore read A. Vesta.
140. ACRÆA LYCIA n. 12.=Acr. Sganzi, p. 141. n. 38.
Guinea, Angola, Abyssinia, Natal, Madagascar.
- „ ACR. SEIS Boisd. MS.; Feisthamel in Ann. Soc. Ent. France, 1850, p. 247.
Cazamanga.
141. ACR. PSEUDEGINA Westw.=Acræa Egina Stoll, Suppl. Cram. pl. 25. f. 3, 3 c. not Eg. of Cramer, our n. 23.
- „ ACR. CIRCEIS, n. 25.=P. Parrhasia Donovan's Drawings in Bibl. Hope, Oxford.
- „ ACR. HYPATIA, n. 27. var. P. Cæcilia Fabr. n. 550. not 16., and Godart, p. 235. n. 16. not p. 177. n. 550.
- „ ACR. SERENA, antè, p. 141. no. 29. Fabr. Godart, Enc. M. ix. p. 232. (exclus. descr. male); Guérin-Menev. Voy. Abyss. vi. p. 372. pl. x. f. 6, 7.
Papilio Eponina Cramer, t. 268. f. A. B. not C. D.
Acræa Manjaca Boisdual, Doubl. antè, p. 141. no. 28.
Guinea, Natal, Abyssinia, Madagascar.
- „ ACR. EPONINA Cramer, t. 268. f. C. D. male, (not f. A. B.); Guérin-Menev. Voy. Abyss. vi. p. 373.
Acræa Serena male, Godart, Enc. M. ix. p. 232.; Doubl. antè, p. 141. no. 29.
Guinea, Angola.
142. ACR. VESTA, n. 37.=P. Terpsichore Cramer, pl. 298. f. B. C. D., not 228. f. A—C., and =P. Vesta Cramer, pl. 119. f. A.
- „ ACR. PETRÆA Boisdual in App. Delegorgue, Voy. Afrique, ii. 569.
South Africa.
- „ ACR. NOHARA Boisdual, op. cit.
South Africa.
- August 1. 1852.

- Page 142. ACR. NATALICA Boisdual, op. cit.
South Africa.
- „ ACR. AMAZOULU Boisdual, op. cit.
South Africa.
- „ ACR. NEOBULE Doubl. antè, p. 140.; Reiche, Voy. Abyss. Entomol. p. 466. pl. 33. f. 3, 4.; Ac. Seis. Boisdual, Coll. var?
Abyssinia.
- „ ACR. DOUBLEDAYI Guérin-Menev. Voy. Abyssinien, vol. vi. p. 378. pl. .; Reiche, Voy. Abyss. (Ferret) Entomol. pl. 33. f. 1, 2.
Abyssinia. (Allied to A. Petræa Boisdual, Voy. Delegorgue, ii. 569.)
- „ ACR. ABDERA Hewitson, Exot. Butt. pt. 2. pl. 6. f. 1, 2.
Fernando Po. (Allied to A. Egeria and Perenna.)
- „ ACR. ACTIACA Hewitson, Exot. Butt. pt. 2. pl. 6. f. 3.
Natal.
- „ ACR. ALCIOPE Hewitson, Exot. Butt. pt. 2. pl. 6. f. 4, 5. (male and fem.).
Western Africa.
- „ ACR. AGANICE Hewitson, Exot. Butt. pt. 2. pl. 6. f. 6.
Natal.
- „ ACR. ALCIONE Hewitson, Exot. Butt. pt. 2. pl. 6. f. 7.
Quito.
152. CETHOSIA CYDIPPE, n. 5.; Donovan, Ins. India, pl. 34. f. 1.
- „ CETH. CYANE, n. 6.; Donovan, Ins. India, pl. 35. f. 2.
- „ CETH. LESCHENAUTII, n. 8.; Lucas, Lep. Exot. t. 4. f. 3.
- „ CETH. LAMARCKII, n. 9.; Lucas, Lep. Exot. pl. 54. f. 2.; and Boisdual, Sp. Gen. Léop. pl. 9. f. 5.
154. AGRAULIS MONETA Guérin, Icon. R. An. Ins. pl. 78. fig. 2.
156. CLOTHILDA EURYALE, n. 3.=Cl. Thirza Hb.
160. TERINOS SINHA Kollar in Hugel's Reise n. Kaschmir, App. p. 438.
Himalaya.
164. MESSARAS ERYMANTHIS=P. Lampetia, Cram. pl. 148. D. D., not E. (not Lampetie Cram. pl. 349. f. A. B.; Cirrochroa? L. p. 158. n. 4.)
174. ARGYNNIS CHILDRENI G. R. Gray, antè, p. 174. n. 6.=Arg. Sakontala Kollar in Hugel's Reise n. Kaschmir, p. 439. pl. 12.
176. ARG. ASTARTE E. Doubl. App. Cat. Lep. Brit. Mus. p. 20., and Doubl. Westw. & Hewits. Gen. D. Lep. pl. 23. f. 5. (Melitæa A.); and see p. 181. note.
Argynnis Pygmaea? Godart, Enc. M. ix. 290. n. 63.
Jamaica.
- „ ARG. SELENIS H. Schiffer, Syst. Bearb. f. 154, 155., and Fischer & Eversmann, Léop. Russ. pl. 4. f. 12.
Kazan, Irkoutsk.
- „ ARG. BELLONA, n. 39.; Donovan's Drawings in Bibl. Hope, Oxford.
- „ ARG. ALEXANDRA Ménétries, Cat. Rais. p. 246.; Herr. Schiffer, Syst. Bearb. i. t. 88. f. 417, 418.; Fischer & Eversm. Léop. Russ. p. 19. pl. 2, f. 3, 4.
Caucasus. (Allied to A. Aglaia.)
- „ ARG. EUGENIA Eversm. Bull. Soc. Nat. Mosc. 1847. tom. 20. p. 2. p. 68.; Fischer & Eversm. Léop. Russ. p. 24. pl. 2. f. 1, 2.
Irkoutsk, Eastern Siberia.
- „ ARG. OSCARUS Eversm. Bull. Soc. Nat. Mosc. 1844. tom. 17. p. 558. pl. 14. f. 1. a, b; Fischer & Eversm. Léop. Russ. p. 44. pl. 5. f. 1, 2.
Eastern Siberia.
180. MELITÆA PHAETON, n. 20.; Cramer, Pap. pl. 193. C. D.; Boisd. Sp. Gen. Lep. pl. 11. f. 3.
181. MEL. THAROS, n. 24.
Dryas Gorgone Hübner, Verz. Bek. Schm.
- „ MEL. LATONIGENA Eversm. Bull. Soc. Nat. Mosc. 1847. xx. iii. p. 66.; Fischer & Eversm. Léop. Russ. p. 71. pl. 8. f. 1, 2.
Irkoutsk.
- „ MELITÆA CASTA Kollar, Ins. Faune S. Persia (Mem. Acad. Vienna), i. p. 10.
South Persia. (Near M. Didyma.)
- „ MEL. PERSEA Kollar, op. cit. p. 11.
South Persia. (Near M. Didyma.)
- „ MEL. URALENSIS Fischer & Eversmann, Léop. Russ. p. 77. pl. x. f. 1, 2. (m.) 3, 4. (f.) var. M. Arduinna?
Southern Uralian Provinces.
- „ MEL. DIDYMOIDES Eversmann, Bull. Soc. Nat. Mosc. 1847, t. xx. p. 67. pl. 1. f. 3, 4.; Fisch. & Eversm. Léop. Russ. p. 82. pl. 8. f. 3, 4.
Eastern Siberia.
184. ERESIA HERA Cramer, pl. 253. f. F. G. not f. G. H.
- „ ER. PHILLYRA Hewitson, Exot. Butt. pt. 2. pl. 4. f. 1.
Mexico.

- Page 184. ER. PELLA Hewitson, *Exot. Butt.* pt. 2. pl. 4. f. 2.
River Amazon. (Allied to E. Eunice and Erysize.)
" ER. PELONIA Hewitson, *Exot. Butt.* pt. 2. pl. 4. f. 3.
Quito.
" ER. PERILLA Hewitson, *Exot. Butt.* pt. 2. pl. 4. f. 4.
Quito.
" ER. PERNA Hewitson, *Exot. Butt.* pt. 2. pl. 4. f. 5.
Rio Janeiro.
" ER. POLINA Hewitson, *Exot. Butt.* pt. 2. pl. 4. f. 6.
Quito. (Nearly allied to E. Nauplia.)
186. SYNCHLOE BONPLANDII, n. 7.=Pap. Narva Fabricius, *Ent. Syst.* iii. pt. 1. p. 249. n. 775.; *Donovan's Drawings in Bibl. Hope, Oxford.* The former name will therefore sink into a synonym.
197. GRAPTA Sp. 3. Gr. G-argenteum, not argenteum.
201. VANESSA IONIA Kindermann, *MS., Fischer & Eversm. Lép. Russ.* p. 111. pl. 13. f. 1, 2.
Eastern and Southern shores of Black Sea
(Allied to Urticæ.)
" VAN. ALGERIA Hombroen et Jacquinot, *Voy. au Pole Sud. Lépidopt.* pl. 2. f. 8, 9.
Triton Bay.
209. JUNONIA CENONE, n. 7.=Vanessa Hierta Godart, p. 318. n. 52. not p. 218. n. 51.
" JUN. CENIA, n. 13.=Vanessa Larinia var. Godart, *Enc. M.* ix. p. .
210. JUN. ARCHESIA, n. 18. Godart, p. 316. not p. 315.
211. JUN. AMELIA Guérin, *Voy. Coquille*, p. 273. pl. 14. no. 1.
(Vanessa Am.).
Offack. (Nearly allied to Junonia Sabina n. 36.)
" JUN. (SALAMIS) CERYNE Boisduval in *Delegorgue, Voy. Afr.* ii. app. p. 592.
Amazoulu.
" JUN. ETHYRA Feisthamel in *Ann. Soc. Ent. France*, 1850, p. 250.
(Salamis E.).
Cazamanca, Western Africa.
" JUN. ANTILOPE Feisthamel, op. cit. p. 250. (Salamis A.).
Cazamanca.
213. CYNTHIA EROTA Fabricius, *Ent. Syst.* iii. pt. 1. p. 76.; *Jones, Icon.* iv. pl. 39. f. 1.; *Donovan's Drawings in Bibl. Hope, Oxford.*
Africa. (C. Arsinoe, var.?) Mus. Banks.
216. ANARTIA IATROPHÆ, n. 1. Cramer, pl. 202. not 209.
222. MYSCALIA (Sect. II.) CATONEPHELE. This section consists of females of the orange spotted Epicalia (p. 257.), and must therefore be expunged.
223. MYS. ANNA n. 16.=Nymph. Maia pars Godart, *Enc. M.* ix. p. 417.
" MYS. (EUNICA) CONCORDIA Hewitson, *Exot. Butt.* pt. 2. pl. 5. f. 1. (Cybdelis C.).
River Amazon.
" MYS. (EUNICA) CINARA Hewitson, *Exot. Butt.* pt. 2. pl. 5. f. 2. (Cybdelis C.).
River Amazon.
" MYS. (EUNICA) CELINA Hewitson, *Exot. Butt.* pt. 2. pl. 5. f. 3. (Cybdelis C.).
River Amazon.
" MYS. (EUNICA) CASTALIA Hewitson, *Exot. Butt.* pt. 2. pl. 5. f. 4. (Cybdelis C.).
River Amazon.
" MYS. (EUNICA) CLYTIA Hewitson, *Exot. Butt.* pt. 2. pl. 5. f. 5, 6. (Cybdelis C.).
River Amazon.
228. ECTIMA IONA Hewitson, *Ann. Nat. Hist.* ser. 2. vol. vi. p. 434. 1850; *Doubl. Westw. & Hewits. Gen. D. Lep.* pl. 42. f. 4.
River Amazon.
229. The fore wings of this genus are here described by Mr. E. Doubleday as having the subcostal nervure only four-branched; in which case the terminal part of the vein is regarded, as was the custom with Mr. E. Doubleday, as a terminal branch. Generally speaking in the descriptions of the genera, I have regarded as branches only of the post-costal vein those portions which arise from its anterior side, and consequently it is never more than four-branched. This is mentioned to avoid the confusion which might arise from this difference in the mode of counting the branches. The upper disco-cellular nervure in Pelia is extremely short, but not wanting, and the middle disco-cellular is curved, not angled.
232. HEMATERA PYRAMUS, n. 1. Fabricius, *Spec. Ins.* ii. p. 130. n. 590.; *Godart, Enc. M.* ix. p. 586. n. 106. (Erycina P.); *Donovan, Nat. Repos.* pt. i. p. 3. 22.
235. EUBAGIS POSTVERTA, n. 1.=P. Mylitta Cram. t. 253. f. D. E. not f. C. D.
- Page 235. EUB. SERINA, n. 2. *Donovan's Drawings in Bibl. Hope, Oxford.*
" EUB. ARTEMISIA, n. 4. *Donovan's Drawings in Bibl. Hope, Oxford.*
239. CALICORE CLYMENA, n. 1. Lucas, *H. N. Lep. Exot.* pl. 72. f. 3.
242. PERISAMA EURICLEA, n. 5. and our pl. 28. f. 5. not f. 3.
245. CATAGRAMMA ASTARTE, n. 12.=Nymph. Condomanus Lucas, *H. N. Lep. Exot.* pl. 72. f. 1.; *Fem. Hewitson, Trans. Ent. Soc. N. S.* 1. p. 100.
" CAT. HYDARNIS Lucas, *H. N. Lep. Exot.* pl. 72. f. 2.
" CAT. HERACLITUS *Donovan's Drawings in Bibl. Hope, Oxford.*
" CAT. ATACAMA Hewitson, *Exot. Butt.* pt. 1. pl. 2. f. 1, 2.
Quito.
" CAT. PARIMA Hewitson, *Exot. Butt.* pt. 1. pl. 2. f. 3, 4.
Quito.
" CAT. KOLYMA Hewitson, *Exot. Butt.* pt. 1. pl. 2. f. 5, 6.
Quito.
" CAT. TOLIMA Hewitson, *Exot. Butt.* pt. 1. pl. 2. f. 7, 8.
Quito.
251. CALLIANIRA EUROTA E. Doubleday, n. 2.
(Fem.) Cybdelis Eurota Hewitson, *Exot. Butt.* pt. 2. pl. 5. f. 7.
" Genus CALLIANIRA Boisd. nec Hübner, *Verz. bek. Schm.* p. 38.
252. CALLIANIRA AMELIA Cramer, pl. 136. f. B. C. not f. C. D.
253. PYRRHOGRYA? SULPITIA, n. 6. Mr. Hewitson regards this species as a Heterochroa.
257. The females of the species of Epicalia, with orange patches on the upper side of the wings, have been discovered by Mr. Bates to be quite unlike their males, being in fact the insects of which Mr. E. Doubleday's second section Catonephele of the genus Myscelia (p. 222.) are composed.
" EPICALIA ACONTIUS, n. 4=Antiochus Fabr. but not Linnaeus, see p. 102.—Obs. P. Acontius Linn., and P. Medea Fabr., are the sexes of the same species.
" EPI. NYCTIMUS Westw. *Gen. Lep. D.* n. 1.; *Hewitson, Exot. Butt.* pt. 3. pl. 9. f. 5 (m.) 6 (f.).
Venezuela.
" EPI. PENTHIA Hewitson, *Exot. Butt.* pt. 3. pl. 9. f. 7.
Nymphalis Micalia Godart, *Enc. M.* ix. p. 415. not Pap. Micalia Fabr.; Vanessa Mic. Godart, *Enc. M.* ix. p. 315. Cramer, *Pap.* pl. 108. both being females.
Rio Janeiro.
" EPI. SABRINA Hewitson, *Exot. Butt.* pt. 1. pl. 3. f. 1. (m.), pt. 3. pl. 9. f. 4. (m.).
Minos Geraes. (Allied to E. Pierretü.)
" EPI. SALACIA Hewitson, *Exot. Butt.* pt. 1. pl. 3. f. 2. (m.), pt. 3. pl. 9. f. 1, (m.) 2, 3. (f.).
River Amazon. (Close to E. Nyctimus.)
" EPI. SAMARIA Hewitson, *Exot. Butt.* pt. 1. pl. 3. f. 3. (Myscelia S.) fem.
Rio de Janeiro.
" EPI. NUMILIUS Cram. pl. 81. f. E. F. not pl. 8. f. 3. F.
259. CALLITHEA BATESII Hewitson, *Trans. Ent. Soc. N. S.* 1. p. 99. pl. xi. f. 2.
River Amazon.
260. AMNOSIA DECORA, our pl. 51. f. 4. not f. 3.
271. NEP. ACERIS, n. 5. and N. Matuta, n. 6. are considered by Mr. Hewitson to form but one species.
272. NEP. MELICERTA, n. 10.=Pap. Blandina Cramer, pl. 327. not 827.
" NEP. METELLA, n. 13. is regarded by Mr. Hewitson as a variety of N. Melicerta, n. 10.
" NEP. OPHIONE, n. 14.=Eurytela Morgani E. Doubleday, *MS.*, and our pl. 31. f. 5.
" Another species of this genus is figured by Kotzebue, in the *Entdeckung Reise.*
276. LIMENITIS CAMILLA, n. 6. Cramer, pl. 114. not pl. 144.
" n. 15. LIM. MARTHA Fabricius, *Ent. Syst.* iii. pt. 1. pl. 139. n. 429.
Siam. Mus. Banks.
278. HETEROCHROA MARSE, n. 6. is the female of a species of Apatura, see p. 304. n. 10.
" HET. ZEA Hewitson, *Ann. Nat. Hist.* ser. 2. vol. vi. p. 435. pl. ix. f. 1, 2.
Rio Janeiro. (Allied to H. Iphicla Cram.)
" HET. ZEBIA Hewitson, op. cit. p. 435. pl. ix. f. 3, 4.
Rio Janeiro.
" HET. ABIA Hewitson, op. cit. p. 436. pl. ix. f. 5.
Rio Janeiro.
" HET. THOASA Hewitson, op. cit. p. 436. pl. ix. f. 6.
River Amazon.
" HET. ABYLA Hewitson, op. cit. p. 437. pl. ix. f. 7.
Jamaica.
" HET. LARA Hewitson, op. cit. p. 437. pl. ix. f. 8.
Venezuela.

- Page 284. ROMALÆOSOMA NARVA, n. 14. *Donovan's Drawings in Bibl. Hope, Oxford*=*Cethosia Bonplandii*, antè, p. 186.
285. ROM. n. 15. *Argenissa Stoll, Suppl. Cram. pl. 27.*
Surinam.
286. EURYPHENE, n. 12. *Gambiæ Feisthamel, in Ann. Soc. Ent. France, 1850, p. 251. pl. 9. f. 2.*
Cazamanca, Western Africa.
- „ EUR., n. 13. *Phreone Feisthamel, op. cit. p. 253.*
Cazamanca.
- „ EUR. COCALIA m. & f. *Feisthamel, op. cit. 1850, p. 254.*
287. ATERICA, n. 7. *Barce E. Doubleday in Ann. Nat. Hist. xx. p. 64.*
Sierra Leone. Mus. Zool. Soc.
288. HARMA EGESTA, n. 5. *Cramer, pl. 46. f. B. C. not f. D.*
291. ADOLIAS LUBENTINA, n. 10. *Cramer, pl. 155. not pl. 255.; Godart, p. 400. not p. 40.*
295. SYMPHEDRA ÆROPUS n. 2. *Cramer, pl. 111. not pl. III.—dele Oread. Marm. Europa, Hübn. Samml.*
304. APATURA ILIA, antè, p. 304. var. A. *Bunea H. Schüffer, Suppl. Hübn. tab. 36. f. 161—164.*
Caucasus.
308. NYMPHALIS EPIJASUS, antè, p. 308. no. 2. *Reiche, Voy. Abyss. (Ferret) Entomol. pl. 32. f. 1, 2.*
Abyssinia.
- „ NYMPH. JASUS, n. 1. male, *Cramer, Pap. pl. 186. f. A. B.*
- „ NYMPH. CASTOR, n. 3.; *Cramer, Pap. pl. 37. f. E. F. (P. Pollux).*
- „ NYMPH. POLLUX, n. 4.; *Cramer, Pap. pl. 37. f. C. D. (P. Castor).*
319. PAPHIA BASILIA *Cramer, pl. 329. f. E. F. not f. C. D.*
325. Note, line 2., for bas read basi.
335. DRUSILLA URANIA=Oreas Dubia Jaira *Hb. Samml. Exot. Schm. Bd. 1. pl. —. Foot note, line 1., read at the end "ocellisque duobus pagina inferæ supra parum distinctis."*
- „ DRUS. MYLECHA *Westw. Trans. Ent. Soc. n. s. 1. p. 175.; White in Appendix to Voyage of Rattlesnake, p. 390. pl. 4. f. 3, 4.*
Louisiade Islands, Indian Ocean. B. M.
337. THAUMANTIS HOWQUA *Westw. Trans. Ent. Soc. n. s. 1. p. 174.*
Shanghai. B. M.
(Allied to T. Camadeva and Nourmahal.)
340. MORPHO SULKOWSKYI *Kollar, Beitr. z. Ins. N. Granada (Mem. Acad. Vienna), t. p. 5. tab. 2. f. 1, 2.*
New Granada. (An. M. Ganymerde *Boisd. antè, p. 339. no. 10.?*)
- „ MOR. PELEIDES *Kollar, op. cit. i. p. 6.*
New Granada. (Allied to M. Achilles, Helenor, &c.)
342. CALIGO PROMETHEUS *Kollar, Beitr. z. Ins. N. Granada (Mem. Acad. Vienna) t. p. 7. tab. 2. f. 3, 4. (Morpho Tr.). An. C. Teucer Linn. antè, p. 342. no. 6. var.?*
New Granada.
- „ CAL. IDOMENEUS n. 1.; *Cramer, pl. 52. f. B. not pl. 52. f. 2.*
- „ CAL. AJAX, n. 7.=*Morpho Atreus Kollar, Beitr. Ins. Faun. N. Granada, pl. 3. f. 1, 2.*
352. TATGETIS CELIA, n. 6.; *Cramer, Pap. pl. 242. not pl. 485.*
- „ TAT. PENELEA *Cramer, Pap. pl. 101. f. G. not f. 6.*
360. DEBIS NEELGHERRIENSIS, n. 10.; *Guérin-Ménév. in Delessert, Souv. Voy. Ind. or p. 75. pl. 21. f. 1.*
Neelgherry Mountains.
362. CYLLO SEPULTA, n. 10. A memoir on this species by M. Alex. Lefebvre has appeared in the *Annales of the French Entomological Society*, n. s. ix. 1851, p. 71. pl. 3., in which the writer endeavours to prove that it is allied to Vanessa Archesia, the anterior wings (and not the posterior as regarded by Dr. Boisduval) being strongly angulated. Dr. Boisduval, in his reply in the same work, 1851, p. XLVI., maintains his former opinion.
366. HETERA ASTYOCHE *Erichs. Append. Schömb. Reise Br. Guiana.*
British Guiana.
374. EUPTYCHIA LIBYE n. 31.; *Donovan's Drawings in Bibl. Hope, Oxford.*
375. NEONYMPHA EURYTRIS, n. 1.=*Pap. Cymela Cram. pl. 132. not pl. 13.*
- „ NEON. CAMERTA n. 3.; *Cramer, Pap. pl. 293. f. F. not pl. 195 f. 8.*
377. EREBIA KEFERSTEINII *Eversmann, Bull. Soc. Nat. Mosc. 1851, p. 610.*
Eastern Siberia. (Allied to E. Epiphron.)
- „ EREB. STUBBENDORFII, antè, p. 377. no. 5. *Ménétries, Descr. Ins. Lehmann. pt. vi. f. 3.*
- Papilio Theano *Tauscher, Mem. Soc. Nat. Mosc. pt. i. p. 207. tab. 13. f. 1.*
Eastern Siberia.
- Page 383. CHIONOBAS SCULDA *Eversm. Bull. Soc. Nat. Mosc. 1851, p. 612.*
Eastern Siberia.
- „ CHION. FULLA *Eversm. Bull. Soc. Nat. Mosc. 1851, p. 614.; P. Bore, Hübn. Pap. fig. 756.*
Eastern Siberia.
384. ARGE HERTA, n. 5. var. A. *Caucasica Nordmann, Bull. Soc. Nat. Mosc. 1851, p. 403. pl. 8. f. 1—3.*
Caucasus.
386. LASIOMMATA CLYMENE, n. 1. var. *Roxandra Nordmann, Bull. Soc. Nat. Mosc. 1851, p. 400. pl. 10. f. 1—4.; Comp. H. Schüffer, t. 22. f. 102, 103.*
Caucasus.
- „ LASIOM. DEIDAMIA *Eversm. Bull. Soc. Nat. Mosc. 1851, p. 617. (Pararga D.)*
Irkoutzk. (Allied to Dejanira.)
390. SATYRUS ANTHE, n. 20. var. *Hanifa, Nordmann, Bull. Soc. Nat. Mosc. 1851, p. 406. pl. 9. f. 1—3.*
Caucasus.
391. SAT. MAMURRA, n. 40., and Sat. *Geyeri, n. 43., are natives of Armenia and Ararat.*
392. SAT. PARISATIS *Kollar, Ins. Faun. S. Persia (Mem. Acad. Vienna), t. p. 11.*
South Persia. (Near S. Fauna and Fidia.)
- „ SAT. MANDANE *Kollar, op. cit. p. 11.*
South Persia. (Near S. Eudora.)
- „ SAT. SAADE *Kollar, op. cit. p. 11.*
South Persia. (Near S. Pamphilus and Amaryllis.)
- „ SAT. MADERAKAL *Guérin-Ménév. Voy. en Abyss. vi. p. 381. pl. 10. f. 1, 2, 3.*
Abyssinia. (Allied to E. Mæra, Mægera, &c.)
- „ SAT. MACROPHTHALMUS *Eversmann, Bull. Soc. Nat. Mosc. 1851, p. 615.*
Russian Armenia. (Allied to S. Alecyone.)
- „ SAT. PALES *Staudfuss in Zeitschr. f. Ent. Schles. Breslau, No. 12. (Hipparchia P.) H. Arsilache, ibid. (var.).*
Europe. (Schaum. Ber. 1850, 221.)
398. CENONYMPHA IPHIAS *Eversm. Bull. Soc. Nat. Mosc. 1851, p. 618.*
Russian Armenia. (Allied to Amaryllis *Hbst.*)
- „ CENONYMPHA PHRYNE, n. 19. is made the type of a separate genus *TRIPHYSA* by *Zeller. Ent. Zeit. Stettin, 1850, p. 310.=Phryne H. Schüffer, Syst. Bearb.*
- „ 1. TR. PHRYNE *Pall. Pap. Tircis Cramer.*
- „ 2. TR. DOHRNII *Zeller. in op. cit. p. 310.*
South Russia.
- „ 3. TR. SUNBECCA *Eversm. (our Cænonympha S. n. 18.)*
406. DIDONIS BIBLIS=*Pap. Hyperia Cram. pl. 236., not 230.*
407. CYSTINEURA CANA *Erichs. Append. Schömb. Reise Br. Guiana.*
British Guiana.
410. ERGOLIS ENOTHREA, n. 4.; *Cramer, Pap. pl. 237., not 236.*
- „ ERG. WEDAH, n. 6.; *Kollar in Hügel's Reise D. Kaschmir Ent. p. 437. (Ariadne W.)*
Himalaya.
417. EURYBIA NICÆA, n. 2.=*Eurybia Salome Lucas, Hist. n. Lep. Exot. pl. 79. f. 2.*
- „ EUR. PERGÆA. Mr. Hewitson states that *Gonopteris Pergæa Hübn. (our Emesis P.) p. 447. n. 6., is congeneric with Eurybia Carolina.*
422. The name of Genus VI., METHONE, requires alteration, being too close to METHONA (antè, p. 115.). The name METHONELLA may be used in its stead.
430. Mr. Hewitson considers *Erycina Glaphyra, n. 14., E. Pandama, n. 15., and E. Tedeia, n. 16., as forming only one species.*
447. EMESIS PERGÆA, n. 6. is an *Eurybia, p. 417.*
452. BEOTIS REGULUS, n. 8.=*Limnas Ebusa E. Doubleday, List. Lep. Brit. Mus.*
458. LEMONIAS ALECTOR, n. 6., may possibly not belong to this genus, having four branches to the postcostal vein of the fore wings.
- „ LEM. ION, n. 7. is possibly a variety of *L. Hebrus, n. 4.*
459. LEM. MISENES, n. 28. Mr. Hewitson thinks this species may be a *Lycæna.*
460. LIMNAS HELIUS, n. 6., and *L. Procas, n. 8., are species of Hesperidæ.*
461. THEMONE PAIS, n. 1.; *Gen. D. L. pl. 72. f. 9.; male not fem.*
467. PAPILIO ÆGON, n. 8. is *Melitæa Ægon, antè, p. 181.*
- „ HESPERIA TARQUINIUS, n. 12. is *Polyommatus Cratægi Boisd. post, p. 499.*
- „ HESP. LUCANUS, n. 13. is probably *Lucia limbaria Swainson, post, p. 502.*

Page 486. THECLA NIPHON, n. 119., not NEPHON.

496. LYCÆNA PANOPE *Eversmann*, *Bull. Soc. Nat. Mosc.* 1851, p. 619.
Lower Oural. (Allied to *Panoptes Hüb.* 670.)
„ LYC. SUBSOLANUS *Eversm.* *Bull. Soc. Nat. Mosc.* 1851, p. 620.
Irkoutzk. (Allied to *Icarius*, *Arion*, &c.)
„ LYC. JESOUS *Guérin-Ménév. Voy. en Abyss.* vi. p. 383. pl. 11.
f. 3, 4. (Polyommatus J.)
Abyssinia. (Allied to *P. Cassius*.)
„ LYC. AMARAH *Guérin-Ménév. op. cit.* p. 384. pl. 11. f. 5, 6.
(Polyommatus A.)
Abyssinia. (Allied to *P. Bætica*.)

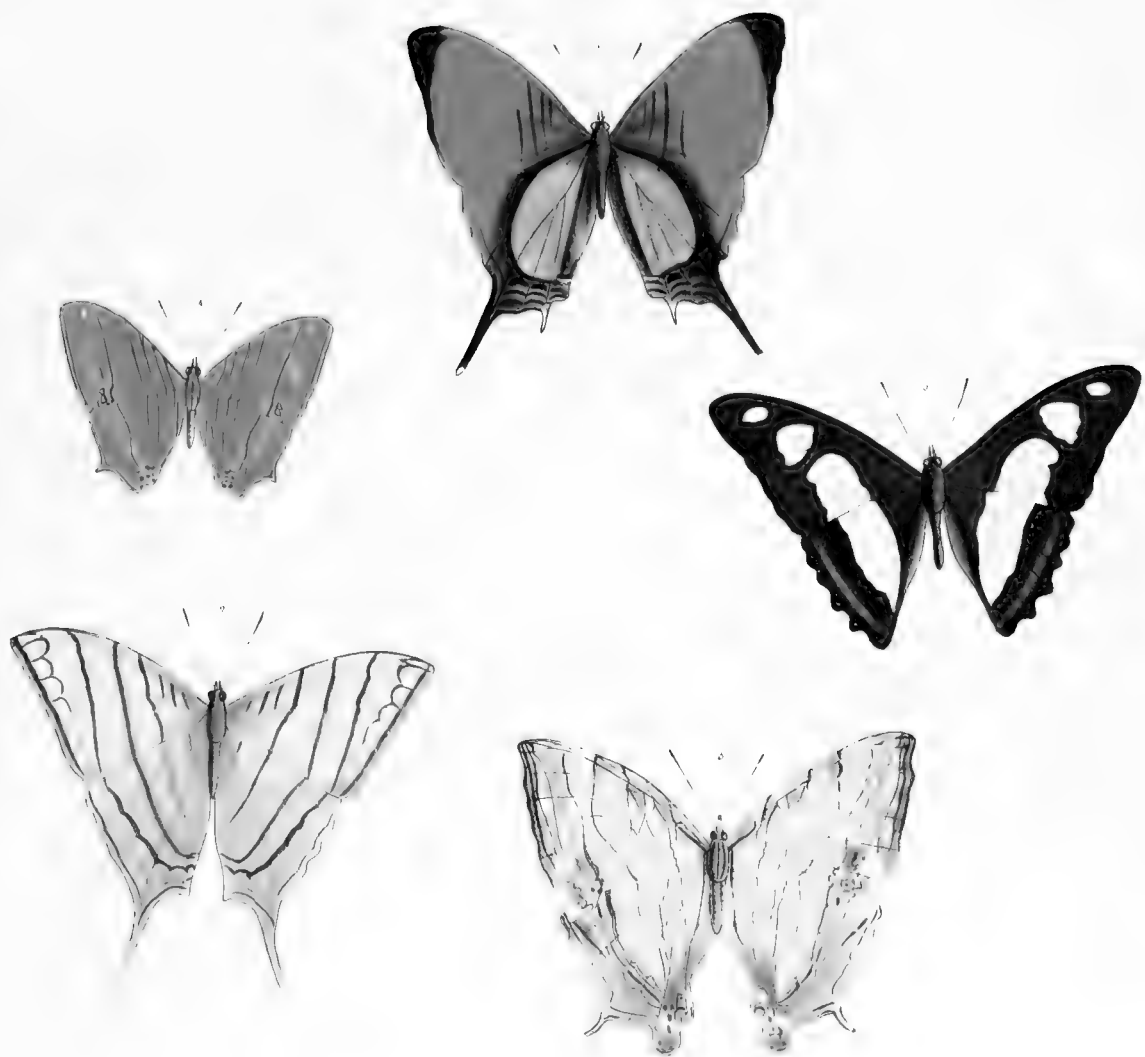
Page 496. LYC. SEBAGADIS *Guérin-Ménév. op. cit.* p. 385. pl. 11. f. 7, 8.
(Polyommatus S.).

- Abyssinia. (Allied to *P. Messapus Godart.*)
„ LYC. LEDERERI *Kindermann MS.*; *Nordmann, Bull. Soc. Nat. Mosc.* 1851, p. 418. tab. XII. f. 1, 2.
Trans-Caucasus.
499. CHRYSOPHANUS CALLIMACHUS, antè, p. 499. no. 29.; *Nordmann, Bull. Soc. Nat. Mosc.* 1851, p. 421. tab. XII. f. 3—5.
Caucasus.
514. n. 74. GONIOBA BATHYLLUS, not BETHYLLUS.
519. NISONIADES CATULLUS *Abb. & Smith*, pl. 24., not 14.

THE END.



THE BUTTERFLY



THE BUTTERFLY
AND ITS HISTORY
AND ITS USES

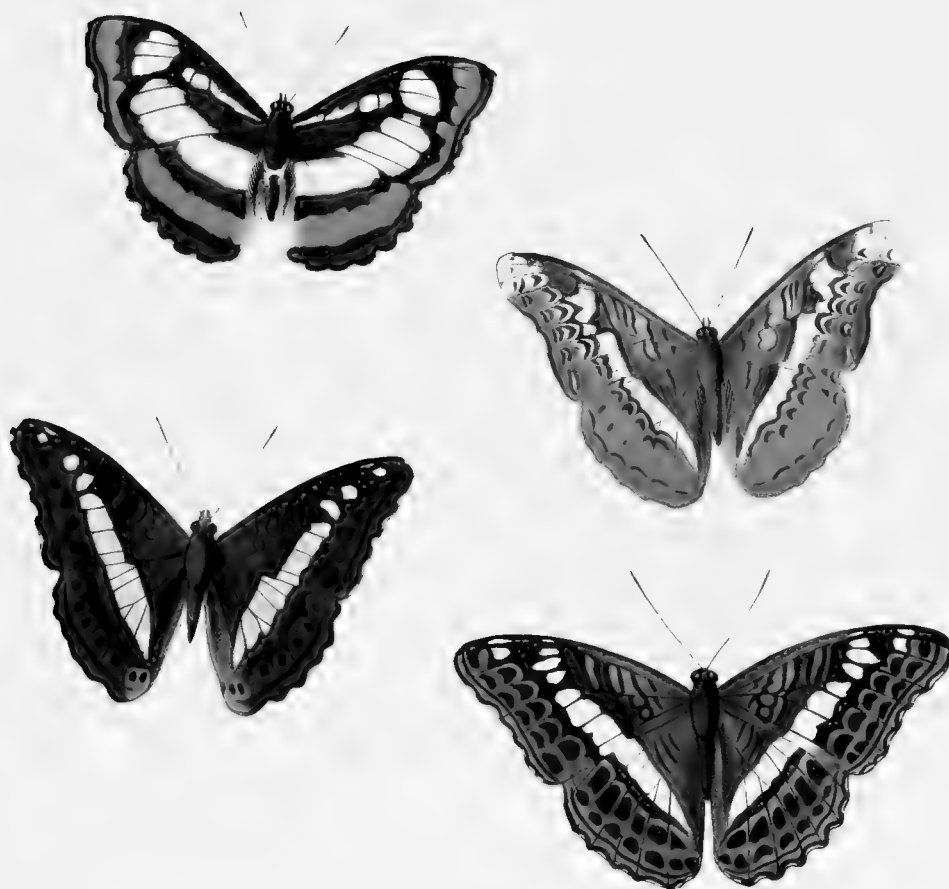
BY J. H. B. B. B.
AND J. H. B. B. B.

1977
HAF
C
SECURITY
A USA



Y
UNIVERSITY
MA USA

XXXV.
 NYMPHOPHILIDAE



1. NYMPHOPHILA (NABA) Doubleday
 2. NYMPHOPHILA (NABA) Doubleday

3. NYMPHOPHILA (NABA) Doubleday
 4. NYMPHOPHILA (NABA) Doubleday

POST OFFICE
HARTFORD, CONNECTICUT
U.S.A.



PLATE 1
THE BUTTERFLIES OF THE
GENUS *Graphium*



Fig. 1. *Graphium* *sp.*

Fig. 2. *Graphium* *sp.*



...SITY
...A USA

XXXVIII.
NYMPHALIDÆ.



W.C. Hewitson del et lith.

Printed by H. K. G. at 101 of W. 10th St.

2 ROMALE DOOMA SCHEFFELI 1911 1912 2 ROMALE DOOMA PRATINAS Doubleday

XXXIII.
 NEMOTOPHILA MOORE.



W. H. WATSON, DEL.

1. NEMOTOPHILA CALMACIS (Drury) — 2. NEMOTOPHILA CALMACIS (Drury)
 3. NEMOTOPHILA CALMACIS (Drury)

THE
MUSEUM OF
NATURAL HISTORY



LIBRARY
UNIVERSITY
MA USA



W. H. Edwards

1851-1854 (1851-1854) 1851-1854
 1851-1854 (1851-1854) 1851-1854

1851-1854 (1851-1854) 1851-1854
 1851-1854 (1851-1854) 1851-1854

THEY
UNIVERSITY
MA USA

2501
1894-1895





UNIVERSITY
OF CALIFORNIA
LOS ANGELES

LEARY
UNIVERSITY
LE MA USA

XIV.
 THE BROWN AND WHITE BUTTERFLY.

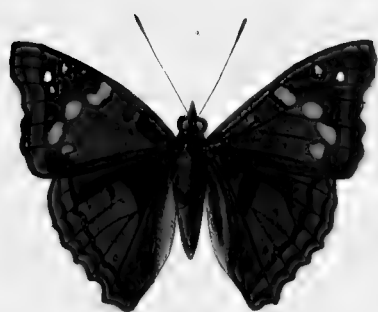


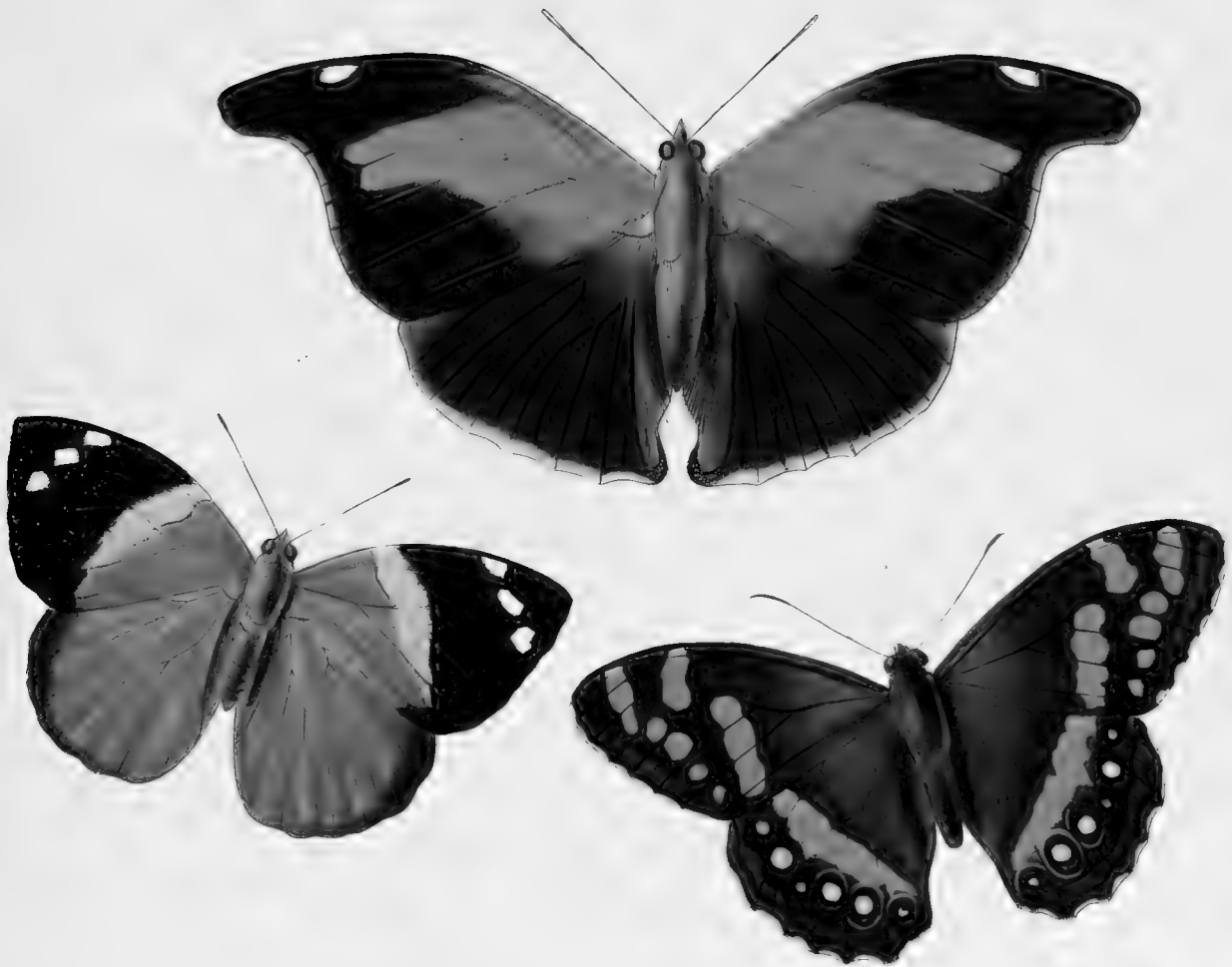
PLATE 14.

PLATE 14.

THE BROWN AND WHITE BUTTERFLY. (Dorsal and Ventral Views.)
 THE BROWN AND WHITE BUTTERFLY. (Dorsal and Ventral Views.)

LIBRARY
UNIVERSITY
MASSACHUSETTS
CAMBRIDGE MA USA

22.71.



22.71. (111)

ACADEMIC
UNIVERSITY
LIBRARY
USA

FIGURE 1



FIGURE 2

FIGURE 3

FIGURE 4

LIBRARY
HARVARD UNIVERSITY
CAMBRIDGE, MA USA

THE
MUSEUM OF NATURAL HISTORY



3 PRITHALL ON BEISO

PLATE
 THE BUTTERFLIES OF THE



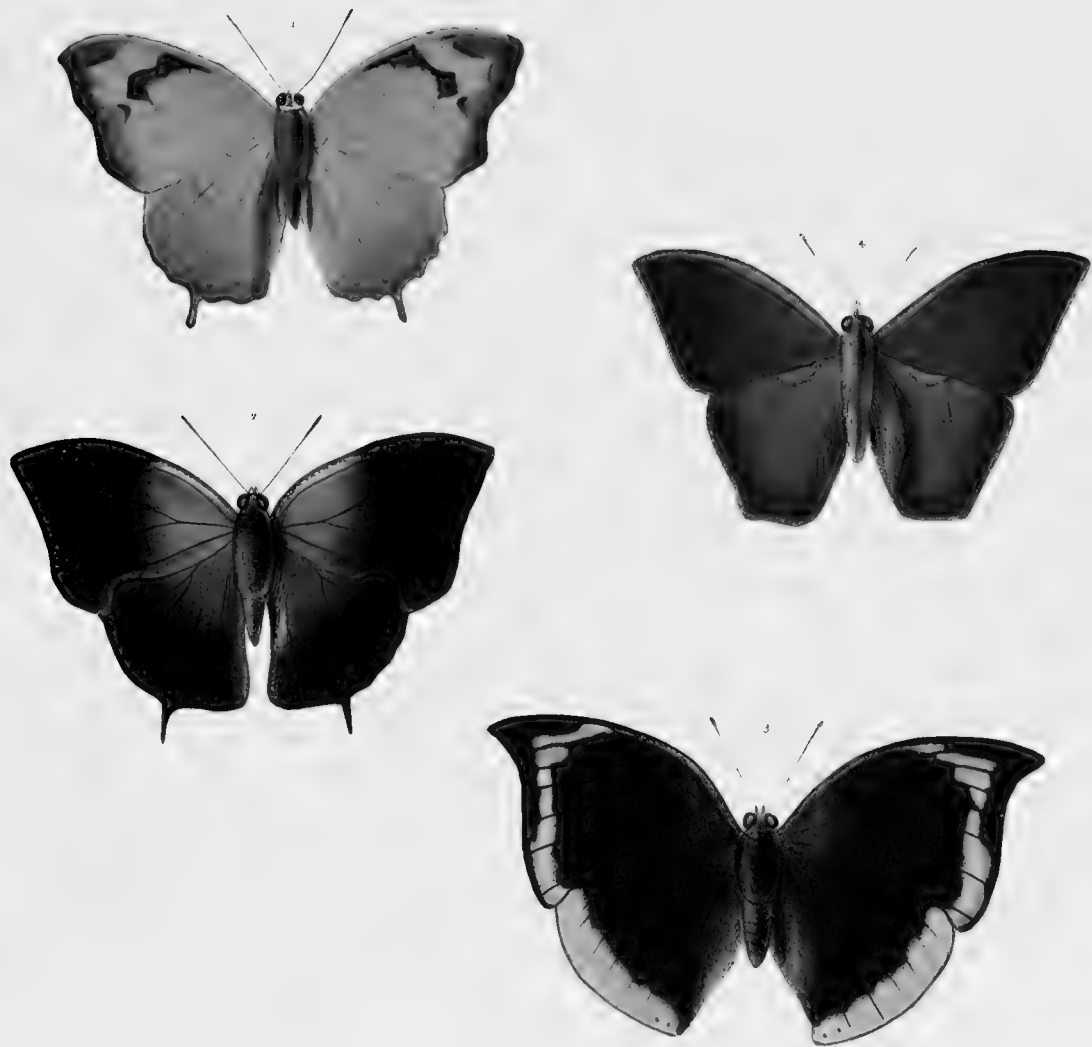
THE BUTTERFLIES OF THE

THE BUTTERFLIES OF THE

THE BUTTERFLIES OF THE
 THE BUTTERFLIES OF THE

UNIVERSITY
CA USA

1.
 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.



1. 2. 3. 4.

1. 2. 3. 4.

1. PAULA MYCETIDUM 6 Ledy 2. PAPHO PHILUMENA Doubleday
 3. PAULA MYCETIDUM 6 Ledy 4. PAPHO PHILUMENA Doubleday

LIBRARY
UNIVERSITY
BOSTON, MA USA

LIBRARY
UNIVERSITY
BRIDGE, MA USA

LII.
NYMPHALIDÆ.



W.C. Hewatson del et lith.

Fig. 1, by Hallmandel & Walton

1 ZEUXIDIA LUXERI ♀ Huber
 2 KALLIMA PUMIA (Boisd.), 3 KALLIMA PARALEKTA, ♀ (Horsfield)

UNIVERSITY
OF CALIFORNIA
LOS ANGELES



RY
UNIVERSITY
MA USA

27
 1877
 1877



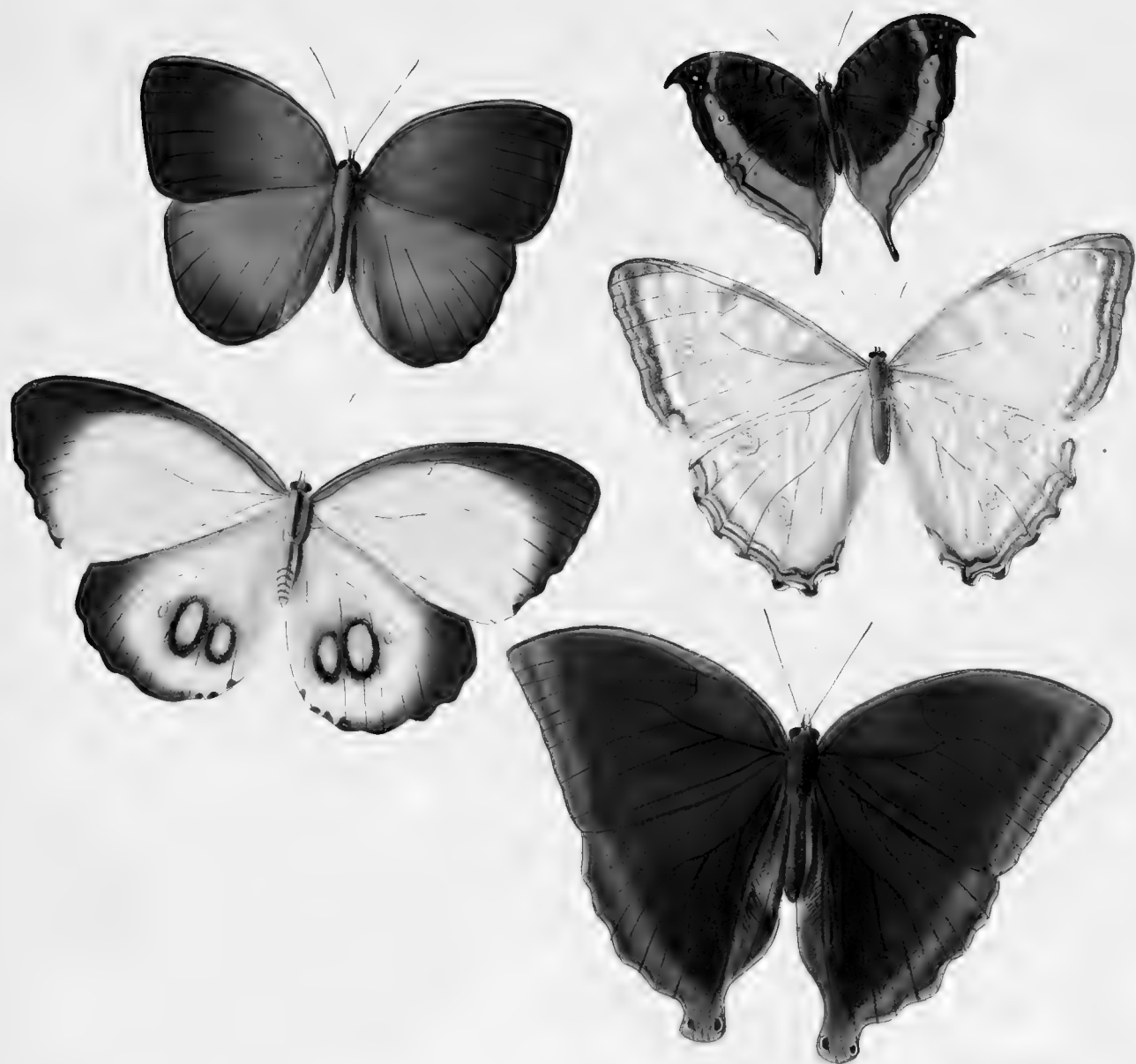
1877

1877

1877

1877

LIBRARY
UNIVERSITY
B. MA USA



12.
MOONLIGHT BUTTERFLY



1. Dorsal view, color

2. Ventral view, color

MOONLIGHT BUTTERFLY (*Gotha octo-lineata*)

LIBRARY
UNIVERSITY
DE. MA USA

A black and white photograph of a butterfly, likely a member of the Pieridae family, shown from a dorsal view. The wings are predominantly dark, with a broad, bright white band crossing both the forewings and hindwings. The forewings have a distinct shape with a pointed apex. The hindwings are broader and feature a scalloped outer margin. The white band is bordered by thin, dark lines. The body is dark and slender, with two long, thin antennae extending from the head. The background is a plain, light color.



BRARY
UNIVERSITY
GE. MA USA

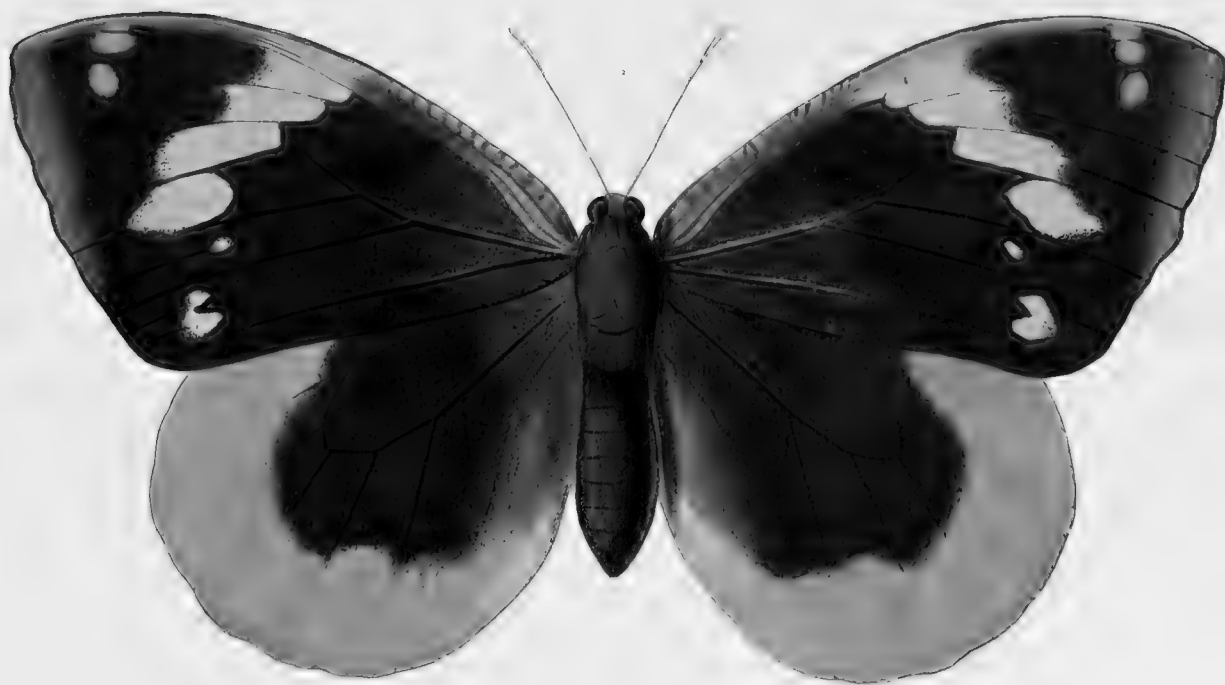
LVII.
 LIOPEIDÆ.



Fig. 1.

Fig. 2.

MARY
UNIVERSITY
LITTLE ROCK, AR USA



LIBRARY
UNIVERSITY
MASS. MA USA



LIBRARY
UNIVERSITY
JELMA USA

LX.
Papilionidae



25 mm. long.

Printed by Hullmandel & Walton

1 PRONOPHILA PHORONEA Doubleday
3 PRONOPHILA THELEBE Doubleday

2 PRONOPHILA IRMINA Doubleday
4 TAYGETIS CHRYSOGONE Doubleday

CRACKY
UNIVERSITY
100 MA USA

LXI.
SATYRIDÆ.

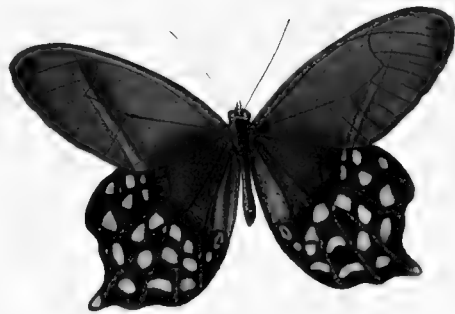
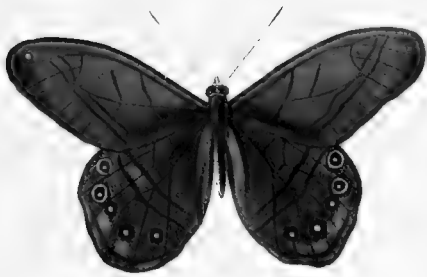
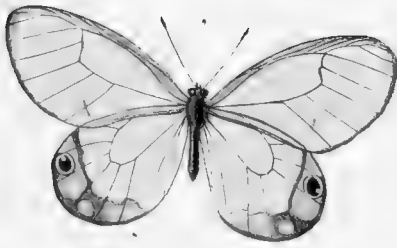
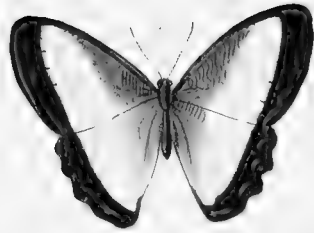


U. S. DEPT. OF AGRICULTURE

Printed by H. M. & W. L. Walton

1 ZOPHOESSA SURA Doubleday. 2 GNOPHODES PARMENO Doubleday.
3 DEBIS SAMIO Doubleday 4. CYLLO LOWII Doubleday

LIBRARY
UNIVERSITY
ROSEL MA USA



FRANK
UNIVERSITY
MASSACHUSETTS USA



LIBRARY
UNIVERSITY
GEORGETOWN, MA USA

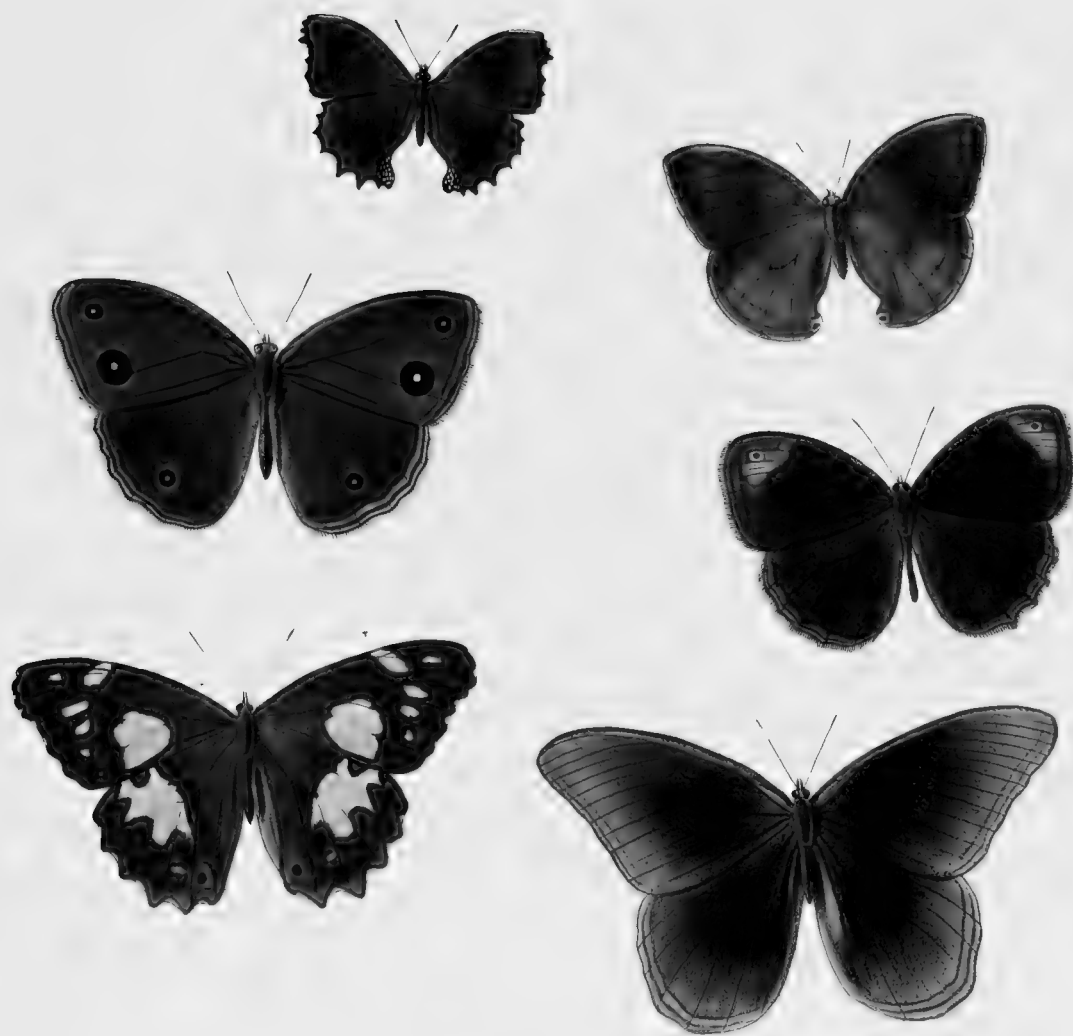
LXIV.



LIBRARY
UNIVERSITY
CA USA



INSTEAD
OF THE FIRST TWO

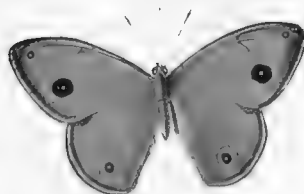


— 82 —

- | | |
|---|-------------------------------------|
| 1. <i>TRONOPHILA TAUROLOLA</i> (Bourm.) | 2. <i>COLLITES NOTHUS</i> (B.) |
| 3. <i>MYCALESIS LACINIA</i> (H. Wils.) | 5. <i>ALISTO GARGHUS</i> (H. Wils.) |
| 4. <i>MYCALESIS LACINIA</i> (H. Wils.) | 6. <i>ALISTO GARGHUS</i> (H. Wils.) |

LIBRARY
UNIVERSITY
OF CALIFORNIA

PLATE THE ...



1. *PHOTURA* ...
2. ...
3. ...

100 CITY
USA

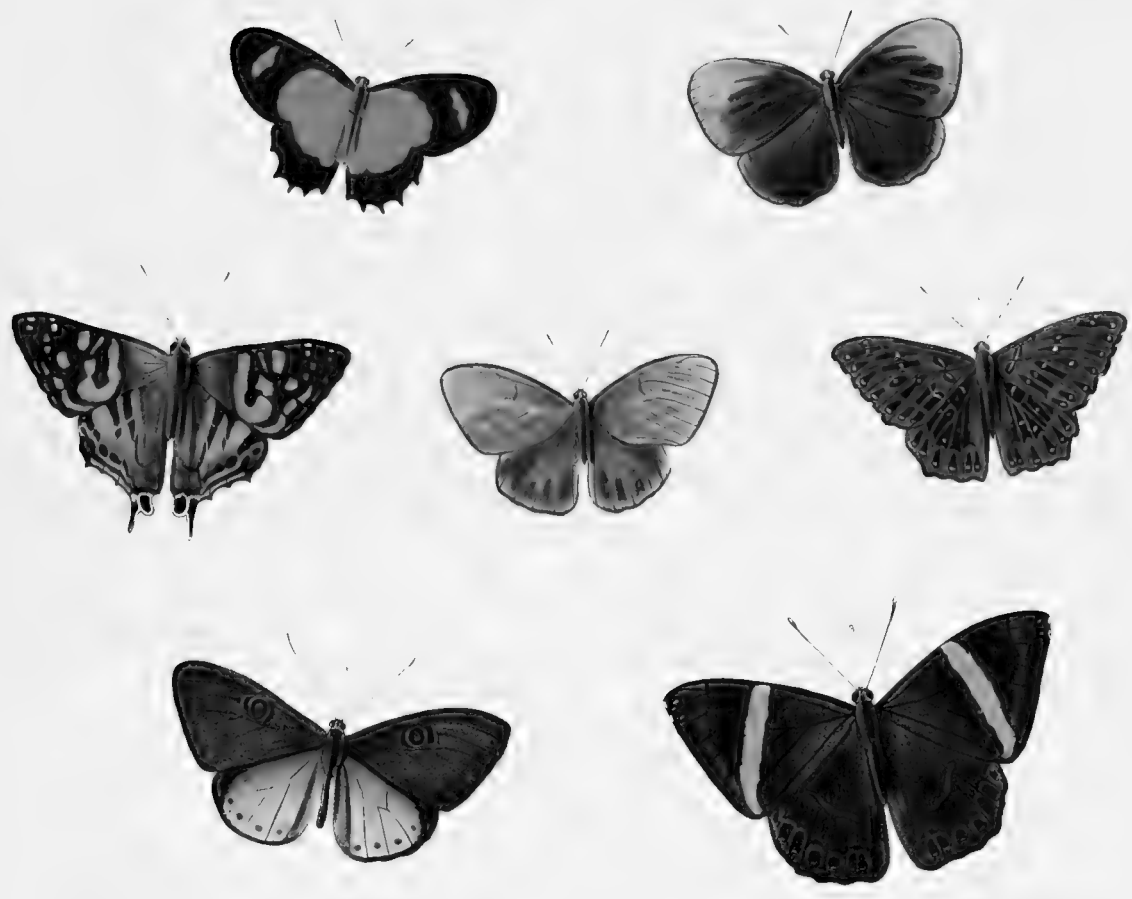


PLATE A

THE BUTTERFLIES OF THE GENUS *PARCELOPS* (PART I)

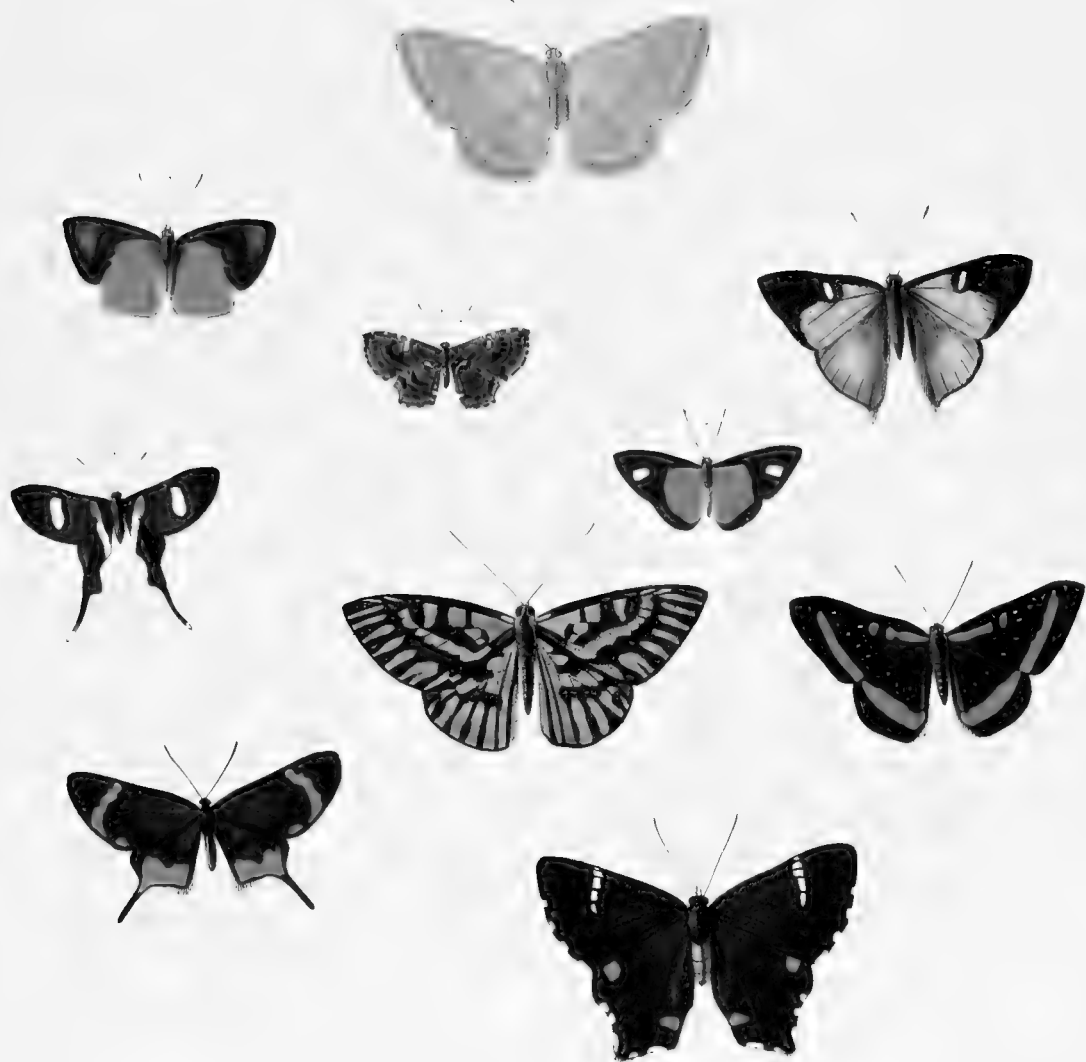
SITY
A USA

PLATE 1857. 1858. 1859.



1. PIERIS LUTICA
 2. PIERIS LUTICA
 3. PIERIS LUTICA

4. PIERIS LUTICA
 5. PIERIS LUTICA
 6. PIERIS LUTICA

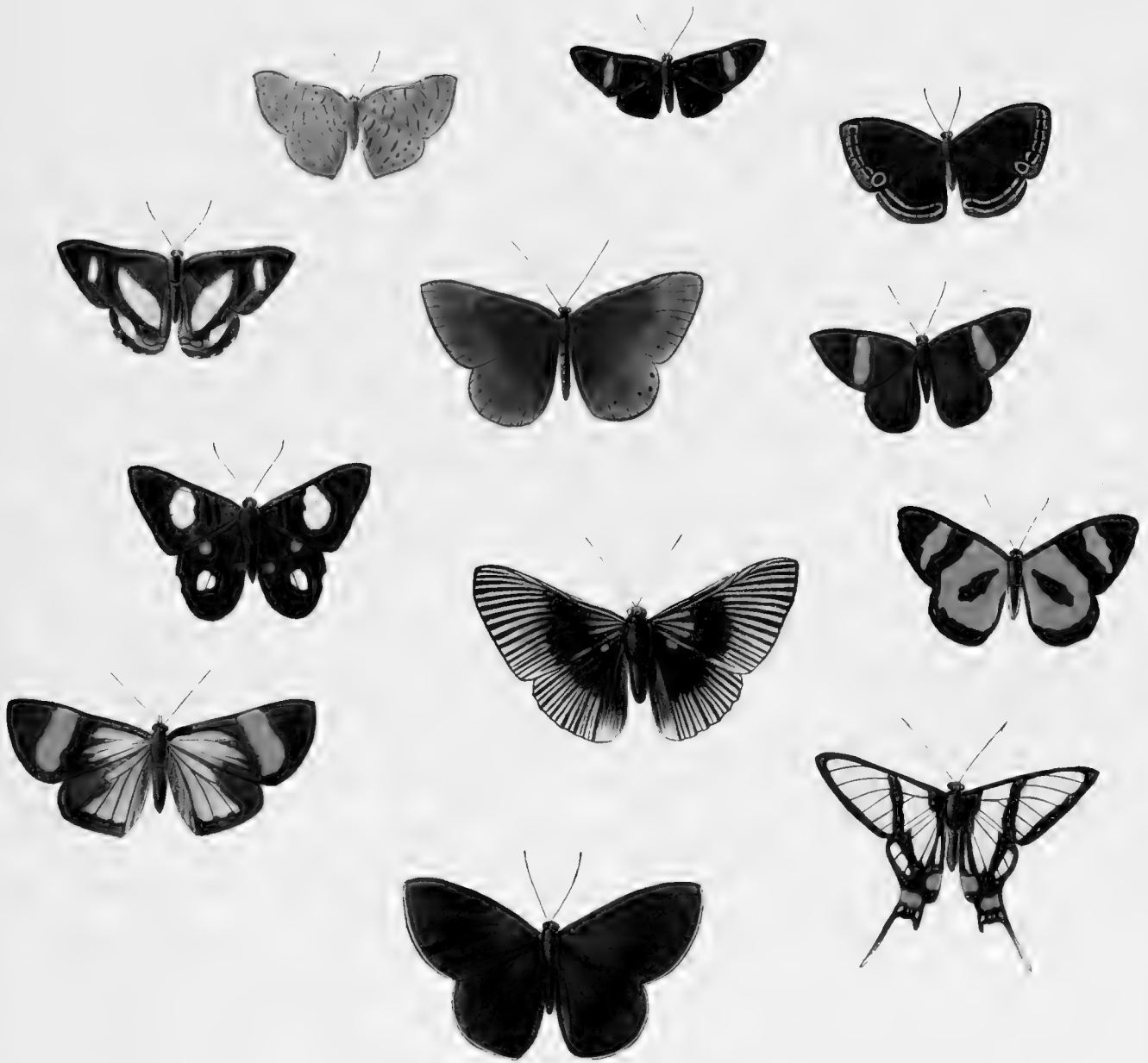


THE BUTTERFLY COLLECTION
OF THE
MUSEUM OF NATURAL HISTORY
AT
THE UNIVERSITY OF CHICAGO
CHICAGO, ILLINOIS



2000
UNIVERSITY
MA USA

PLATE XXII.



1. Euphydryas auronta

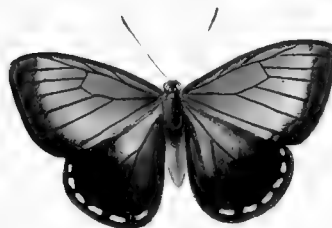
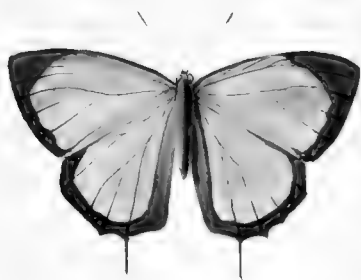
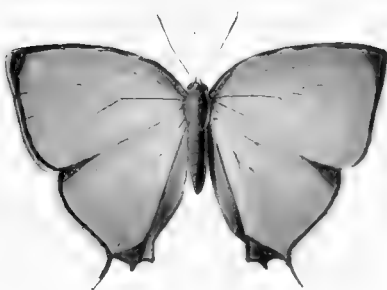
12. Euphydryas auronta

- | | |
|--------------------------------|----------------------------------|
| 1. EUPHYDRYAS AURONTA Westwood | 9. ARACONIA TROCHONE & Westwood |
| 2. CORYMBIA MANILLA Westwood | 10. ARACONIA TROCHONE & Westwood |
| 3. HALICHTIS CYLLA Westwood | 11. DEMONE PALLAS Westwood |
| 4. EUPHYDRYAS AURONTA Westwood | 12. NISEME ALEUTICA Westwood |
| 5. EUPHYDRYAS AURONTA Westwood | 13. EUPHYDRYAS AURONTA Westwood |
| 6. EUPHYDRYAS AURONTA Westwood | 14. EUPHYDRYAS AURONTA Westwood |
| 7. EUPHYDRYAS AURONTA Westwood | 15. EUPHYDRYAS AURONTA Westwood |
| 8. EUPHYDRYAS AURONTA Westwood | 16. EUPHYDRYAS AURONTA Westwood |

LIBRARY
UNIVERSITY
GEORGETOWN, MA USA

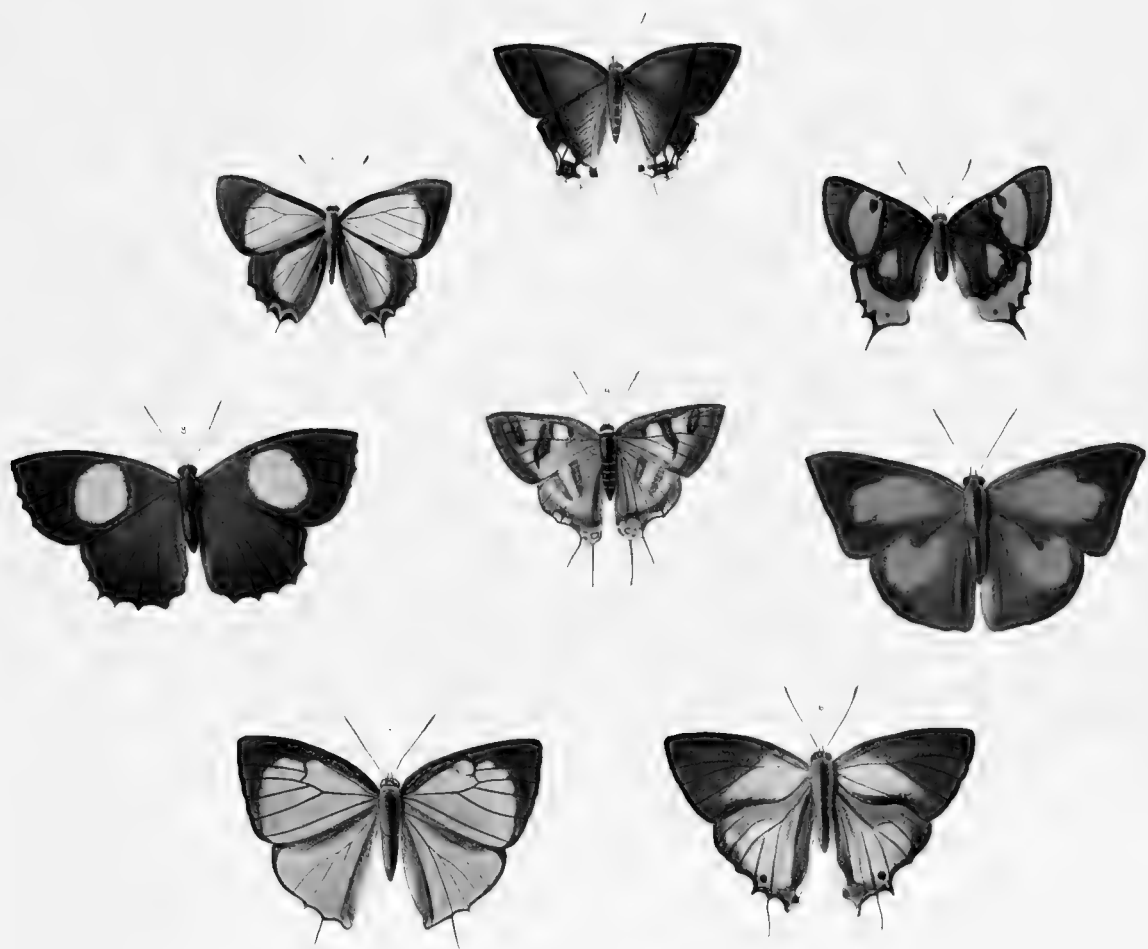


LIBRARY
UNIVERSITY
CAMBRIDGE, MA USA



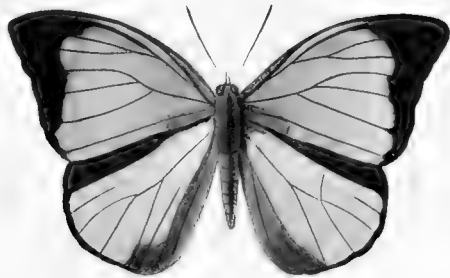
LIBRARY
UNIVERSITY
DORCHESTER, MA USA

127
128

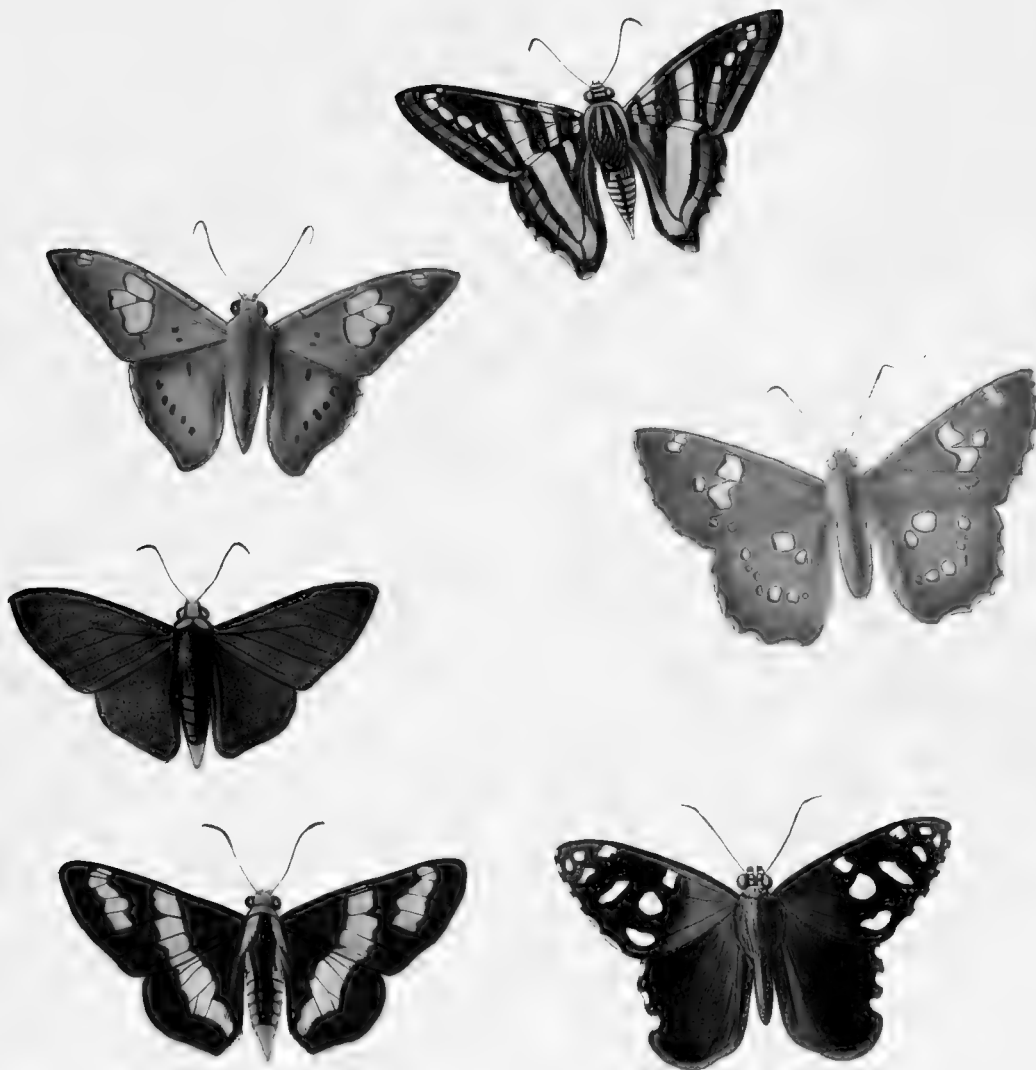


LIBRARY
UNIVERSITY
EDENHALL USA





蝶類 分類學



蝶類 (Diptera)

蝶類 (Diptera)

蝶類 (Diptera) 分類學
 蝶類 (Diptera) 分類學
 蝶類 (Diptera) 分類學

蝶類 (Diptera) 分類學
 蝶類 (Diptera) 分類學
 蝶類 (Diptera) 分類學

LIBRARY
UNIVERSITY
CAMBRIDGE MA USA

PLATE FIVE



| | |
|---|--|
| 1. <i>EPHEMERUS</i> <i>TRANS</i> <i>WATER</i> | 2. <i>FAM. HULA</i> <i>LINE</i> <i>WATER</i> |
| 3. <i>MEDE</i> <i>WATER</i> <i>WATER</i> | 4. <i>PERCIVAL</i> <i>WATER</i> |
| 5. <i>MYALEX</i> <i>COSMOS</i> <i>WATER</i> | 6. <i>MYALEX</i> <i>COSMOS</i> <i>WATER</i> |
| 7. <i>MYALEX</i> <i>COSMOS</i> <i>WATER</i> | 8. <i>MYALEX</i> <i>COSMOS</i> <i>WATER</i> |

NOT LIBRARY
OF UNIVERSITY
AMSTERDAM, MA, USA

PLATE FIGURES 1-5



FIGURE 1

FIGURE 2

FIGURE 3
 FIGURE 4
 FIGURE 5
 FIGURE 6

MOZ LIBRARY
UNIVERSITY
WINDSOR, MA USA



W. C. Hewitson, del et lith 1852

Printed by Hullmandel & Walton

SUPPLEMENTARY PLATE.

1. SERICINUS TELAMON (Donovan) 2. EUTRESIS HYTEREA Doubleday
3. METHONA THEMISTO (Hübner)

THE LIBRARY
OF THE UNIVERSITY
OF CALIFORNIA, BERKELEY

Date Due

~~14 Jun 50~~

